

An Investigation into E-participation Adoption: Factors
Influencing Provision and Utilisation of E-participation
Opportunities in Tanzania

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DECLARATION AND STATEMENTS

Declaration

This work has not previously accepted in substance for any degree and is not being concurrently submitted in candidature for any degree.

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Statement 1

This thesis is the result of my own investigations, except where otherwise stated. Other sources are acknowledged by citations giving explicit references. A complete set of references is appended.

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DEDICATION

To my lovely wife, Jacqueline, and our good children, Lucy, Dionysus and Peter.

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None of those who have supported me is accountable for any errors and expressed views in this thesis.

ABSTRACT

Research on the adoption of e-participation without considering government-citizen relationships does not generate adequate knowledge about the magnitude, patterns and factors influencing the adoption. Previous studies of the adoption of e-participation, which included Tanzania in their populations, excluded government-citizen relationships in their measurement approaches. Before this research, the significant factors of adoption of e-participation in Tanzania were not fully known as a proxy is not always accurate.

This study, therefore, examines the factors which influence the adoption of e-participation in Tanzania. The focus is on e-participation, which reflects the top-down, bottom-up relationship between the government and citizens.

The research methods were a survey, web content analysis and a face-to-face semi-structured interview, and the collected data were analysed quantitatively and qualitatively. Rogers Diffusion of Innovation theory informed the analytical framework. Samples, which were achieved through probability and non-probability strategies, were drawn from the populations of Tanzanian citizens, government officials, government ministries and traditional national media institutions.

The findings revealed that the adoption of e-information was high, but it not total, while the adoption of e-consultation and e-decision-making was low. However, citizens deliberated on policy issues on social media pages of traditional national media institutions. Government guidance, communication standards, values, needs, and discretionary decisions were among the factors, which were associated with the adoption of e-participation in Tanzania.

In e-participation research, usage of e-participation features and available information on government websites enhances an understanding of the adoption of e-participation rather than its proxy, which is the e-participation environment. Usage is critical as the evidence shows it captures the dynamic and reciprocal government-citizen relationships adequately.

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1 INTRODUCTION

From the early 1960s, it has been argued that society is changing from an industrial to an information society, which is a new epoch indicating a new social formation (Duff, 2000, 2004, 2012; Sloane, 2005; Wilson, Kellerman, & Corey, 2013). However, scholars have not yet established the threshold of the information society; that is, the point at which informatisation turns an industrial society into an information one (Duff, 2000; Wilson et al., 2013). Informatisation is the transition the society undergoes towards the information society (Duff, 2000, 2012). The main reason for the change is that increasingly the society relies more heavily on information than goods and services (Wilson et al., 2013).

The information society is characterised by the largest share of the information sector in the gross national product (GNP) and the labour force (Duff, 2000, 2012). Another element is the information explosion; that is, the highest production, distribution and consumption of information (Duff, 2000, 2012). The last aspect is the convergence of telecommunications and computer technologies and the high speed of diffusion of such technologies within and across nations (Duff, 2000).

For example, Machlup (1962, p. 374) discovered that between 1947 and 1958, the United States (US) information sector grew by 10.6% annually while the GNP also rose by 5.9% per annum. In Japan, the Research Institute of Telecommunications and Economics (RITE) (1970) as cited in Duff (2000) reported that informatisation rose from 75 points in 1953 to 193 points in 1963. However, there is a debate on how precisely to measure informatisation (Duff, 2000) and the information society (Diamantides, 2017; Duff, 2000). This is because there are conceptual and methodological issues on those aspects of the information society (Duff, 2000; Wilson et al., 2013).

According to Duff (2000), the studies of Machlup (1962) and RITE (1970) as cited in Duff (2000) have not revealed a new social formation as a result of the role of information in society. Duff further reflects that Bell (1989) has suggested a kind of new social formation, which is a socio-technical system.

Duff (2000) argues that all societies are information societies manifested by two or three elements touched on above, but they differ, for example, in the rate of diffusion of new Information and Communication Technology (ICT). As Bell (1989) as cited in Duff (2000, 2012) suggests on the new social formation, there is an element of the new socio-technical formation, which is related to information policy issues. The information policies around the globe address issues like freedom of information, privacy, and data protection and security (Duff, 2004, p. 77).

Focusing on ICT diffusion, despite the digital divide, there has been a dramatic change in all domains of life, particularly in terms of efficiency and efficacy (Castells, 2009; Duff, 2000, 2012; Ramalingam, Hernandez, Martin, & Faith, 2016; United Nations (UN), 2017, 2018c; World Bank, 2016). Based on this revolution, nearly all domains have a prefix 'e-' meaning computerised (Duff, 2012, p. 14), for example, a service like e-commerce for computerised commerce (UN, 2017). For example, in the banking sector, customers can conduct transactions like payments and money transfers on the Internet (World Bank, 2016, p. 248). In the public administration, e-government means online public administration and service delivery, while e-participation means online citizen engagement in policy-making processes (Cullen, 2010; Kneuer & Harnisch, 2016). Following this ICT revolution, which continues, research has been conducted on various topics to understand factors and impact of diffusion of e-domains like e-participation.

For example, between 2000 and 2012, there were 826 e-government articles in journals of Public Administration (n=45) and Information Science and Library Science (n=69) listed by the International Statistics Institute (ISI) (Bolivar, Munoz,

& Hernandez, 2016). Bolivar et al. (2016, p. 41) used the minimum score of 0.25 for the impact factor or 50 or more total citations to select journals for 2012. The articles covered topics such as online public services, e-participation, digital divide, public sector servants, accountability, transparency and trust (Bolivar et al., 2016, pp. 47-48).

For instance, Welch, Hinnant, and Moon (2005) addressed the question of how Internet use, citizen satisfaction with e-government, and citizen trust in government are interrelated in the United States. Welch et al. found that trust in government is strongly associated with e-government satisfaction, and e-government satisfaction is related to online services, information provision and citizen engagement. Welch et al. concluded that there were a high provision of information and online services, but interactions between the government and citizens were limited.

1.1 CORE OF RESEARCH PROBLEM AND STUDY PURPOSE

For more than a decade, UN (2003, 2004, 2005, 2008, 2010, 2012, 2014, 2016, 2018a) has surveyed the performance of its member states on e-government and e-participation. Their findings on e-participation sparked the debate on factors influencing the adoption of e-participation across its member states. The debate centres on the reliability of a proxy which the UN uses to measure the adoption of e-participation (Astrom, Karlsson, Linde, & Pirannejad, 2012; Kneuer & Harnisch, 2016).

Different scholars define the term proxy differently, but the common thread is a representation. For example, Plowman (2016) defines it as the authority to represent somebody else while Wittrock et al. (2017) define it as a respondent's responses about another person. Additionally, Marriott (2013) designates it as the use of one person to represent another, while Gomm (2009) defines it as a measurement of one thing as an indication of another. According to Marriott, Plowman, and Wittrock et al., the proxy is not always accurate. According to UN's

surveys, the proxy for e-participation as a practice is the presence of e-participation and availability of information on government websites (Astrom et al., 2012; Kneuer & Harnisch, 2016; UN, 2014, 2016).

Following that debate, this research seeks to examine the factors, which influence the adoption of e-participation in Tanzania. Data were collected through content analysis, face-to-face semi-structured interviews, and an online survey, and sources of data were government ministries, government officials, citizens, and national traditional mass media.

In this research, the UN's proxy is replaced with the usage of e-participation features to improve understanding of e-participation adoption. As apart from the UN surveys, there are no other studies of e-participation in Tanzania, this research informs the debate about e-participation adoption in the context of Tanzania. Moreover, it informs regional and international communities on the power of the UN e-participation index to measure online public participation as a membership eligibility criterion. The research also confirms the relevance of studying e-participation as a practice by including the usage of e-participation features.

1.2 RESEARCH QUESTIONS

This study poses four research questions as follows:

1. To what extent, does the government provide citizens with e-participation opportunities?
2. How often do citizens utilise the e-participation opportunities the government offers?
3. To what degree do citizens participate in public debates on social media pages of traditional national media outlets?
4. To what extent does the government consider the online views of citizens in policy-related decisions?

There are only four questions because the research focuses on the provision and use of online information and interactive features for policy-related decision-making processes, and readiness of citizens for e-participation.

1.3 OVERVIEW OF A THEORETICAL FRAMEWORK

Diffusion of Innovation theory guided this research. Rogers M. Everett established this theory in the early 1960s to address an overarching question about people taking too long to adopt even innovations which have apparent benefits. Following that big question, the theory explains a process of diffusion of innovation and factors which influence such a process to help change agencies achieve their goals efficiently (Rogers, 2003; Rogers & Shoemaker, 1971).

According to Rogers (1983, 2003) and Rogers and Shoemaker (1971), diffusion means a process by which an innovation is communicated via various channels over time among members of a social system. Innovation is an idea, practice or object like a technological device which is perceived as new by a person, organisation or nation (Rogers, 1983, 2003; Rogers & Shoemaker, 1971). The social system means a set of interrelated units that have different functions, but they work jointly to reach a common goal (Rogers, 2003; Rogers & Shoemaker, 1971).

There are many fields of study which employ this theory to conduct research, and a number of diffusion publications have been growing (Rogers, 2003). The disciplines are agriculture, communication, sociology, public health, education, marketing, management, geography (Rogers, 2003). Similarly, the theory underpins research which uses various methods like survey, semi-structured interviews, observation and ethnography (Rogers, 2003). It also began to explain the diffusion of innovation among organisations (Rogers, 2003).

A detailed discussion of this theoretical framework is in the literature review chapter.

1.4 DESCRIPTION OF TANZANIA

Tanzania has various features like history, government system, among others. These will be described in further detail below.

1.4.1 A short history of Tanzania

During the pre-colonial era, there were chiefdoms which were mainly tribally based (Maguire, 1969). For example, the rulers of those chiefdoms were chief Milambo of Nyamwezi, chief Mkwawa ruled the Hehe people, and Mangi Meli of the Chagga (Legal and Human Rights Centre (LHRC) & Zanzibar Legal Services Centre (ZLSC), 2018). Between the 7th and 15th century, Arabs visited Tanzania and conducted trade which included slavery as slaves also provided transport for goods like ivory (Kumiko, 2009; LHRC & ZLSC, 2018; Ndembwike, 2006). There were two main slave routes, which were the central and southern routes, and the big slave markets were Bagamoyo and Zanzibar (Maxon, 2009). In the 18th century, colonials abolished it because of the humanitarian basis (Campbell, 2013; Quirk, 2011) and demand for labour to produce raw materials and construction (Campbell, 2013).

Between the 16th and 17th century, the Portuguese also settled in Tanzania (Kumiko, 2009). Colonialism was ushered in following the scramble for raw materials and partition of Africa in the mid-1880s (LHRC & ZLSC, 2018; Ndembwike, 2006). Following the partition of Africa, Tanzania came under the rule of Germany until the end of the First World War (Kumiko, 2009; LHRC & ZLSC, 2018; Ndembwike, 2006). After World War One, Tanzania came under the protectorate, and after World War Two was under the trusteeship of the United Kingdom (LHRC & ZLSC, 2018).

The movement for freedom and nationalism escalated during the Majimaji war, which lasted for two years from 1905 to 1907 (LHRC & ZLSC, 2018; Maxon, 2009; Ndembwike, 2006). The term 'majimaji' means liquid (Taasisi ya Taaluma za Kiswahili, 2014). The war is called 'Majimaji' because it was believed that the

magic Majimaji warriors used could turn bullets fired by German soldiers into a liquid, but the bullets never became liquid (LHRC & ZLSC, 2018). In 1961, Tanzania gained independence after a peaceful struggle for freedom (LHRC & ZLSC, 2018; Ndembwike, 2006) and in 1962, she became a Republic. One may wonder whether, in 1961, Tanzania was fully independent because the Queen of the United Kingdom was the head of the state until 1962 (LHRC & ZLSC, 2018).

Moreover, Tanzania Mainland, formerly the United Republic Tanganyika and Tanzania Zanzibar, formerly the United Republic of People of Zanzibar, united on 26 April 1964 and became Tanzania (Ewald, 2011; Jamhuri ya Muungano wa Tanzania, 2013b; LHRC & ZLSC, 2018; Ndembwike, 2006; Nyerere, 1973; Shivji, 2008). However, their political parties, Tanganyika African National Union (TANU) and Afro Shiraz Party (ASP) united later on 05 February 1977 and became Chama Cha Mapinduzi (CCM) (Ewald, 2011; Jamhuri ya Muungano wa Tanzania, 2013b; Shivji, 2008). In the English language, CCM stands for a Revolutionary Party (Taasisi ya Taaluma za Kiswahili, 2014).

1.4.2 Geographical elements

Tanzania is in Eastern Africa between 1 and 12 degrees latitudes South of the Equator (Jamhuri ya Muungano wa Tanzania, 2014b; LHRC & ZLSC, 2018; Matovelo, 2008; Oxford atlas, 2016). From West to East, it lies between 29 and 41 degrees longitudes in the East of the prime meridian (Jamhuri ya Muungano wa Tanzania, 2014b; LHRC & ZLSC, 2018; Matovelo, 2008; Oxford atlas, 2016). The neighbouring countries are Kenya and Uganda from the North; Rwanda, Burundi, the Democratic Republic of Congo and Zambia from the West (LHRC & ZLSC, 2018; Matovelo, 2008; United Republic of Tanzania, 2016b); and Malawi and Mozambique from the South (Matovelo, 2008; National Bureau of Statistics, 2008a, 2008b; United Republic of Tanzania, 2016b). On the east, Tanzania borders the Indian Ocean (Jamhuri ya Muungano wa Tanzania, 2014b; Matovelo, 2008; National Bureau of Statistics, 2008a, 2008b; United Republic of Tanzania, 2016b).

The area of Tanzania is 940,000 square kilometres (United Republic of Tanzania, 2016b). Of this, the inland water bodies like lakes and rivers cover 60,000 square kilometres (United Republic of Tanzania, 2016b).

There are three big lakes which are Victoria in the North, Tanganyika in the West and Nyasa in the South (Jamhuri ya Muungano wa Tanzania, 2014b; National Bureau of Statistics, 2008a, 2008b; Ndembwike, 2006; United Republic of Tanzania, 2016b). Other small lakes are Rukwa and Msimba in the West, Kitangiri, Eyasi, Mikuyu, Balangida Iela, Balangida, Manyara, Buruugi, and Natron in the North-East (National Bureau of Statistics, 2008a, 2008b). In the North-West, there are lakes Burigi and Ikimba (National Bureau of Statistics, 2008a, 2008b). The biggest rivers are Rufiji and Kagera where any water vessels bigger than a canoe can be used for transport (United Republic of Tanzania, 2016b).

The landforms comprise plateaus, valleys and mountains. Apart from the Coastline, a large part of the country is 200 meters or more above sea level (United Republic of Tanzania, 2016b). There are also big mountains like Uluguru, Usambara, Meru and Kilimanjaro (Ndembwike, 2006; United Republic of Tanzania, 2016b). Mount Kilimanjaro is not only the highest mountain in Tanzania but also in Africa at 5,895 meters high (United Republic of Tanzania, 2016b). There is also the Great Rift Valley with two branches stretching from the South to the North-East and North-north West (United Republic of Tanzania, 2016b).

Tanzania is in the tropical (Oxford atlas, 2016) and semi-temperate regions (Economist Intelligence Unit, 2015), but it also has different local climatic conditions like equatorial, sub-tropical and semi-arid areas (Oxford atlas, 2016). Annually, there are two main seasons, which are dry and rainy spells (United Republic of Tanzania, 2016b). The dry season lasts for six months from May to October while the rainy spell starts from November to May (United Republic of Tanzania, 2016b). The rainy seasons include a short rain period from October to January and a long one from March to May (United Republic of Tanzania, n.d.-a).

In the coast and around Mount Kilimanjaro there is a short spell of rainfall between October and December (United Republic of Tanzania, 2016b). However, due to local climatic conditions, in the Western part of the country around Lake Victoria, it rains throughout a year with heavy rains between March and May (United Republic of Tanzania, 2016b).

1.4.3 Population

The government conducts a census of people every ten years, and the last one was carried out in 2012. By 2012, there were about 44.9 million people (National Bureau of Statistics, n.d.). There were 21.8 million males, while females were 23.1 million (National Bureau of Statistics, n.d.). The census also revealed that 70.3% (31.6m) of people lived in rural areas while 29.7% (13.3m) dwelled in the urban place (National Bureau of Statistics, n.d.). One-third of the population was youthful while two-fifths were children (National Bureau of Statistics, n.d.). Officially, United Republic of Tanzania (2007) defines youth as a person aged between 15 and 35 years.

During the period between 2002 and 2012, the population growth rate was 2.7 (National Bureau of Statistics, n.d.). Furthermore, the projections indicate that during the period between 2013 and 2035, the total population of Tanzanians will be 89.2 million (United Republic of Tanzania, 2018). Females will be 45.2 million, while males will be 44.0 million (United Republic of Tanzania, 2018). Moreover, though the population will grow, the growth rate started to drop from 3.1% in 2013, and by 2035, it will be 2.8% (United Republic of Tanzania, 2018).

By 2012, as Table 1.1 depicts, most people were literate and spoke Kiswahili while some spoke both Kiswahili and English. Additionally, there were more illiterate people in rural areas than in urban places.

Table 1.1. Ability to Read and Write and Languages Used in Tanzania

Reading and writing	Language	Urban	Rural
Able	Kiswahili	6,724,480	14,437,876
	English	163,033	141,869
	Both	3,014,471	1,920,356
	Other	23,464	40,529
Total		9,925,448	16,540,630
Unable		1,282,347	9,124,519

Source: Adapted from Tables 8.2 and 8.3 by United Republic of Tanzania, 2014a, pp. 59-60

During the last census, it was also revealed that 14.5 million people attained various highest levels of formal education, but the majority were primary school leavers (82%; n=11.9m) (United Republic of Tanzania, 2014a). Additionally, university graduates were very few (2.1%; n=0.3m) (United Republic of Tanzania, 2014a). The census also showed that only 19.2m people were employed, but two-thirds of the employed were in the rural area. The principal occupation in rural place was farming (86%; n=11.4m) (United Republic of Tanzania, 2014a).

World Bank (2017) categorises Tanzania as a low-income country. In 2016, one-third of the population was estimated to be poor, the Gross Domestic Product (GDP) was United States Dollar (USD) 47.7 billion while the per capita income was USD 979 (Jamhuri ya Muungano wa Tanzania, 2017).

1.4.4 Government system

Tanzania has various political institutions which operate together to achieve the common goals of the country. The written constitution of the United Republic of Tanzania of 1977, which was last amended in June 2005 illustrates the nature, powers and functions of such institutions. In this research, the description of the Tanzania government system focuses on identification, political institutions, political actors, government-citizens relationship, and administrative structure.

Tanzania identifies itself as one-nation-state, a united republic (United Republic of Tanzania, 2005). It is the union of two independent nation-states: the Republic

of Tanganyika and the Republic of Peoples' of Zanzibar (Jamhuri ya Muungano wa Tanzania, 2014b; United Republic of Tanzania, 2005). After the union on 26 April 1964 (Jamhuri ya Muungano wa Tanzania, 2014b; United Republic of Tanzania, 2016b), these two parts of the union are Tanzania Mainland and Tanzania Zanzibar (United Republic of Tanzania, 2005). However, Tanzania Zanzibar is a semi-autonomous nation-state (Economist Intelligence Unit, 2016; United Republic of Tanzania, 2005). Additionally, it is a secular, democratic state with a multiparty system (United Republic of Tanzania, 2005). It practises direct and representative democracy (United Republic of Tanzania, 2005). It is also a socialist and self-reliant state (United Republic of Tanzania, 2005), but one may wonder whether practically Tanzania lives that ideology because it adopted a liberal market economy in the 1990s (Killian, 2004; United Republic of Tanzania, n.d.-c).

There are three major categories of political institutions in the government system of Tanzania which are the executive, judiciary and parliament (Shaba, El-Noshokaty, Ndeuka, & Brinkel, 2018; United Republic of Tanzania, 2005). The term executive is used interchangeably with the phrase the government (Birch, 1998; Taasisi ya Taaluma za Kiswahili, 2014). The parliament, which in Kiswahili is Bunge (Taasisi ya Taaluma za Kiswahili, 2014), comprises the President of the United Republic of Tanzania and National assembly (Bunge, 2015). These three political organs are independent of each other, but there is also a discussion on whether all of them enjoy equal levels of independence when exercising their powers (Ewald, 2011; UN, 2018a).

As in many nation-states, these political institutions have different functions to reach a goal of Tanzanians. The executive ensures the well-being of people through making and implementing policies, decisions, and enforcing laws (Bunge, 2015; United Republic of Tanzania, 2005). The judiciary oversees justice and interpreting laws including the constitution (United Republic of Tanzania,

2005) while the parliament enacts laws, checks the government, and approves government proposals like the plans and budgets (Bunge, 2015; United Republic of Tanzania, 2005).

As mentioned above, as Tanzania Zanzibar is semi-autonomous, there are two sets of major political institutions to enable them to operate smoothly (United Republic of Tanzania, 2005). The government of Tanzania Mainland is the government of the United Republic of Tanzania while that of Tanzania Zanzibar is the Revolutionary Government (Jamhuri ya Muungano wa Tanzania, 2014a; United Republic of Tanzania, 2005). There is a high court of Zanzibar and that of Tanzania Mainland, but there is only one court of appeal which serves the United Republic of Tanzania (Jamhuri ya Muungano wa Tanzania, 2014a; United Republic of Tanzania, 2005). In Tanzania Mainland, there is a union parliament while that of Tanzania Zanzibar is called the 'House of Representatives' (United Republic of Tanzania, 2005).

In this arrangement, there are union and non-union affairs to avoid any conflict between Tanzania Mainland and Zanzibar institutions (United Republic of Tanzania, 2005). The union matters are constitution and Union Government; foreign affairs; defence; police; emergency/ disaster management; citizenship; immigration; international trade and external borrowing; and public service management in the Union Government (Jamhuri ya Muungano wa Tanzania, 2014b). Other affairs are customs and income tax; transport and communication (air, marine and surface transport, and postal and telecommunications); Tanzanian and foreign currency and banking; industrial licensing; and higher learning (Jamhuri ya Muungano wa Tanzania, 2014b). Natural resources, crude oil, petrol, and natural gas; National Examination Council; research; meteorology; statistics; Court of Appeal; and political parties' registration are also included in the union matters (Jamhuri ya Muungano wa Tanzania, 2014b). Although the arrangement of these political organs works, there is a debate on whether the

set-up meets all interests of Tanzania Mainland and Zanzibar (Jamhuri ya Muungano wa Tanzania, 2013a; Shivji, 2006).

There are various political actors including the voters, elected political parties, government officials such as ministers and civil servants and civil society organisations (CSOs). Voters are selecting leaders and representatives during general elections, which are conducted regularly after every five years while the elected are representing their constituents (United Republic of Tanzania, 2005). Government officials and civil servants are administering and managing government and court businesses (United Republic of Tanzania, 2005). Political parties are constitutionally competing for the running of the government, particularly during general and local elections (United Republic of Tanzania, 2005), but some people and organisations doubt the fairness and freedom of the elections (Freedom House, 2019; LHRC & ZLSC, 2018, 2019; Lofchie, 2014). By mid-March 2019, as Table 1.2 depicts, there were 19 registered political parties (Office of Registrar of Political Parties, 2019) including Chama cha Mapinduzi which was the only political party before 1992 when the multiparty system was restored (Jamhuri ya Muungano wa Tanzania, 2013b).

Table 1.2. Registered Political Parties in Tanzania by 18 March 2019

No.	Full name	Short name	Registration number	Date of registration
1	African Democratic Alliance Party	ADA-TADEA	11	-
2	Alliance for African Farmers Party	AAFP	63	-
3	Alliance for Change and Transparency	ACT	83	-
4	Alliance for Democratic Change	ADC	80	-
5	Chama cha Demokrasia na Maendeleo	CHADEMA	3	-

No.	Full name	Short name	Registration number	Date of registration
6	Chama cha Kijamii	CCK	79	-
7	Chama cha Mapinduzi	CCM	1	01/07/1992
8	Chama cha Ukombozi wa Umma	CHAUMMA	81	-
9	Civic United Front	CUF	2	-
10	Democratic Party	DP	57	-
11	Demokrasia Makini	MAKINI	53	-
12	National Convention for Construction and Reform	NCCR	5	-
13	National League for Democracy	NLD	6	-
14	National Reconstruction Alliance	NRA	9	-
15	Sauti ya Umma	SAU	66	-
16	Tanzania Labour Party	TLP	12	-
17	Union for Multiparty Democracy	UMD	4	-
18	United Democratic Party	UDP	13	-
19	United People's Democratic Party	UPDP	8	-

Note. – means date unavailable

Source: Office of Registrar of Political Parties, 2019

The civil society comprises of various organisations advocating for different matters like human rights (Lange, Wallevik, & Kiondo, 2000). This society is defined as the space between individual people and the state (Lange et al., 2000, p. 2). Some of the CSOs are LHRC, Tanzania Gender Networking Programme (TGNP) and Tanzania Women Lawyers Association (TAWLA) (Lange et al., 2000).

The constitution stipulates the relationship between the government and citizens. For example, citizens are the foundation and source of all legitimate state powers,

and the government is accountable to them (United Republic of Tanzania, 2005). Moreover, the citizens are required to exercise their constitutional duties and responsibilities, including participating in public affairs such as decision-making processes either directly or indirectly (United Republic of Tanzania, 2005). In Tanzania, people acquire citizenship by birth, descent and naturalisation (United Republic of Tanzania, 1995). The basic requirements for an electorate membership in Tanzania are a minimum age of 18 years and Tanzanian citizenship (United Republic of Tanzania, 2005). However, there are other specific requirements for political leadership; for example, aspirants for the presidency must be a citizen by birth and with a minimum age of 40 years (United Republic of Tanzania, 2005).

Although the government always discourages social classes and are not recognised officially (Lofchie, 2014; Nyerere, 1966), there are socio-economic differences amongst Tanzanians (Lofchie, 2014) which emerged during post-independence (Pratt, 1976). The manifestation of such social disparities is the use of language terms such as 'wanyonge' (Myers, 2016; United Republic of Tanzania, n.d.-d, n.d.-e, n.d.-c) and 'walalahoi' (Ewald, 2011; Myers, 2016). According to Property and Business Formalisation Programme, 'Wanyonge' in English means disadvantaged people in a sense that their businesses are not legally and formally recognised (United Republic of Tanzania, n.d.-d, n.d.-e, n.d.-c) or the abject poor (Myers, 2016, p. xv). It may also mean "the weaker members of the society" (Mkapa, 2004, cited in United Republic of Tanzania, n.d.-c). In English, 'Walalahoi' is "the dispossessed ones" (Myers, 2016, p. xv) or 'the toilers those who eat one meal a day or sometimes no meal at all' (Ewald, 2011, p. 366). Additionally, the 2012 national census also revealed that there are still social differences in terms of, say, possession of assets, education and income level across the general population (United Republic of Tanzania, 2014a).

1.4.5 Political situation

Over time the political climate in Tanzania has been relatively stable, but there have been some elements of turbulence (Baraza la Maaskofu Katoliki Tanzania, 2018; Economist Intelligence Unit, 2015, 2019; Freedom House, 2019; LHRC & ZLSC, 2018, 2019; Lofchie, 2014). The turbulence seems to increase in recent years because political rights and civil rights have deteriorated (Baraza la Maaskofu Katoliki Tanzania, 2018; Economist Intelligence Unit, 2015, 2019; Freedom House, 2019; LHRC & ZLSC, 2018, 2019).

For example, regarding political rights, except for the general elections campaign, the government has ordered political parties' leaders and parliamentarians to conduct public rallies only in their constituencies (LHRC & ZLSC, 2018, 2019). The restriction could hinder political parties from mobilising party members, publicising party policies and running forums across the country because the campaign period might not be sufficient for those activities (Baraza la Maaskofu Katoliki Tanzania, 2018; Freedom House, 2019; LHRC & ZLSC, 2018, 2019). Moreover, the government also denies leaders and members of opposition political parties their right to demonstrate for alleged security reasons (LHRC & ZLSC, 2019). Additionally, it appears that more opposition political leaders and MPs have been arrested than their counterparts in the ruling party (Freedom House, 2019; LHRC & ZLSC, 2019).

After restoring the multiparty system in the early 1990s, Tanzania has conducted five general elections for president, MPs and councillors (United Republic of Tanzania, 2016c). She holds such elections after every five years (United Republic of Tanzania, 2005), and CCM won all elections, but the winning margins have been dropping (Economist Intelligence Unit, 2015; Lofchie, 2014). To a greater extent, the general elections were well-prepared, but there have been complaints about their freeness and fairness (Baraza la Maaskofu Katoliki Tanzania, 2018; Economist Intelligence Unit, 2015; Freedom House, 2019; LHRC & ZLSC, 2018,

2019; Lofchie, 2014). The main concern on the manner the National Electoral Commission (NEC) and the Zanzibar Electoral Commission (ZEC) have conducted previous elections seems to indicate that these commissions are not impartial (Freedom House, 2019). The lack of level playing field, irregularities, violence, and boycotting of by-elections manifest the alleged impartiality of these electoral commissions (Baraza la Maaskofu Katoliki Tanzania, 2018; Freedom House, 2019; LHRC & ZLSC, 2018, 2019). For example, the High Court ruling that NEC should not engage Municipal, Town and District Executive Directors as returning officers because some are CCM members indicates the likelihood of impartiality (Magai, 2019; The Citizen Reporter, 2019).

The participation of citizens in political matters have also been threatened because of the enacting of the so-called draconian legislation (Baraza la Maaskofu Katoliki Tanzania, 2018; Freedom House, 2019; LHRC & ZLSC, 2018, 2019). The legislation which sparked the public debates are the 2015 Cybercrimes Act, 2016 Media Services Act, and the 2017 Electronic and Postal Communications (Online Content) Regulations (Freedom House, 2019; LHRC & ZLSC, 2018, 2019). Following the passing of this legislation, some newspapers were either banned or suspended (Baraza la Maaskofu Katoliki Tanzania, 2018). For example, the government suspended the Tanzania Daima and Raia Mwema newspapers for 90 days and the Mwanahalisi newspaper for two years (LHRC & ZLSC, 2018). Moreover, the government banned Mawio newspapers for good, but the High Court of Tanzania ruled the case filed by the newspaper in favour of the paper (Freedom House, 2019; LHRC & ZLSC, 2018).

Following the current state of political affairs in Tanzania, Freedom House (2019) considered Tanzania to be partly free. Furthermore, Baraza la Maaskofu Katoliki Tanzania (2018) suspected that if the situation did not improve, the national unity and peace might disappear because of hatred and severe polarisation. Moreover,

LHRC and ZLSC (2019) urged the government to address all human rights issues seriously and on time.

1.4.6 Regional and district structure

Like some other countries such as the United Kingdom, Tanzania has various divisions in terms of regions and constituencies. According to the constitution of Tanzania of 1977 amended in 2005, the president decides or approves further divisions of the country to enhance administrative matters (United Republic of Tanzania, 2005). Tanzania has a total of 26 administrative regions in Tanzania Mainland (United Republic of Tanzania, 2005, 2016a) and five in Tanzania Zanzibar (United Republic of Tanzania, 2016b). There are also districts, councils, constituencies, divisions, wards, streets, villages and hamlets (Shaba et al., 2018). Except for constituencies, all these units constitute regional administration and local authorities known as the local government through which according to the constitution, direct democracy is nurtured and practised (United Republic of Tanzania, 2005).

1.4.7 ICT penetration in Tanzania

Despite the digital divide, there is also a rapid diffusion of computers, mobile phones, and the Internet in Tanzania due to socio-economic and political transformations which began in the mid-1990s (United Republic of Tanzania, 2003, 2016a). However, the rate of adoption of mobile phones is higher than that of the Internet (Tanzania Communications Regulatory Authority (TCRA), 2019). As Table 1.3 shows, of 9.3 million households, 3% possessed computers, 63% had mobile phones, and 5% had Internet facilities (United Republic of Tanzania, 2014a). According to the 2012 household budget survey, of 10,400 homes, 2% owned computers, 57% used mobile phones while 1% had their computers connected to the Internet (United Republic of Tanzania, 2014b).

Table 1.3. Number of Households Using Computers, Mobile Phones and the Internet

Device/ media	No. of households		%	
	Rural	Urban	Rural	Urban
Computer/ laptop	31,676	222,536	12	88
Mobile phones	3,353,182	2,573,620	57	43
Internet facility	207,655	230,300	47	53

Source: Adapted from Table 11.13 by United Republic of Tanzania, 2014a, pp. 157-159

Over time the accessibility of the Internet increased; for example, according to TCRA (2014b), users accessed the Internet either from the office, home, or internet cafes. From 2012, the number of internet users who have accessed the Internet from home surpassed that of those who have done it from organisations (TCRA, 2014b). There were also 13 telecentres from which people access the Internet (TCRA, 2011).

Additionally, between 2011 and 2018, on average, most people accessed the Internet through mobile wireless technology (84%) rather than fixed wireless and wired (16) (TCRA, 2017, 2019). However, in 2018, the share of mobile wireless technology increased (96%) while that of fixed wireless and wired dropped (4%) (TCRA, 2019). The rate of adoption of the Internet rose to 43% (23,142,960) in 2018 (TCRA, 2019) from 12% (5,311,218) in 2011 (TCRA, 2017). Likewise, the subscriptions of mobile phones increased from 59% (25,666,455) (TCRA, 2017, 2019) to 81% (43,497,261) (TCRA, 2017, 2019).

The government also adopted ICT including the Internet as part of the implementation of the public service reform programme to improve effectiveness, efficiency, and match global development (Jamhuri ya Muungano wa Tanzania, 2009). The adoption of ICT has threatened the government values, which are information and national security, but it introduced new norms to safeguard such values (Jamhuri ya Muungano wa Tanzania, 2009). For instance, between 2008 and 2014, the government issued sets of technical standards and

guidelines for the acquisition and use of ICT and Internet applications like e-mail and websites (Jamhuri ya Muungano wa Tanzania, 2009, 2013e; United Republic of Tanzania, 2014c).

1.5 THESIS STRUCTURE

This thesis is organized in two main areas, which are front and back matter and main text. The preliminaries entail an abstract and contents and the back matter constitutes references and appendices. The main body has eight chapters. The first one, which is this one, introduces the study beginning with information society then narrows down to a topic of e-participation adoption. It also covers an overview of the research problem, the purpose of the research, research questions, and outline of the theoretical framework, Tanzania description, and the structure of this thesis.

Chapter two covers the literature search and review approach, and it presents a debate on factors influencing e-participation adoption across the UN member states. This chapter also contains the research methods employed by previous e-participation research and theoretical and conceptual frameworks. Moreover, the brief history of democracy, diffusion of democracy in Tanzania. The third chapter is about research design and ethical issues. From the fourth to the sixth chapter, the exposition of data which were collected through the content analysis, survey, and semi-structured interviews is presented. Each chapter covers the analysis based on each of the selected approaches. The seventh chapter covers the discussion of the findings, while the last chapter concludes the thesis.

1.6 SUMMARY

Information societies have been around for some time, but there is a growing use of information and revolution of the ICT. The advancement of the ICT paves the way to the existence of e-participation. Other aspects of the information society are information sector, also known as the information economy, and the

volume and flow of information across the entire society. However, there is a debate about the measurements of the information society.

The research problem stems from the use of a proxy to study the adoption of e-participation among UN member states. The proxy is not reliable because it does not reflect a top-down, bottom-up relationship between the government and citizens.

The overview of the Diffusion of Innovation theory highlights the theoretical framework and analytical framework of this research. The research questions 1, 2, 3 and 4 also facilitate a generation of knowledge to fill the identified gap. The description of Tanzania enriches the context of this research.

2 LITERATURE REVIEW

Relevant literature was critically reviewed to provide a specific context for this research. The literature presented the existing knowledge and debate on the factors influencing the adoption of online public participation. The existing knowledge and debate established the core of this research (Pickard, 2013; Sumerson, 2014). The available e-participation knowledge before this investigation and discussions facilitated the identification of main arguments and counter-arguments, a series of gaps and selection of a gap to fill (Blaxter et al., 2010; Cooper, 1988; Randolph, 2009). They also refined research questions 1, 2, 3 and 4 and informed the selection of appropriate research approaches to answer them, and the choice of the theory to guide this study (Blaxter et al., 2010; Cooper, 1988; Randolph, 2009).

The review of this research has six main sections, which include literature search, a debate on the adoption of e-participation and research methods and results of previous e-participation research. Other areas are a history of democracy, diffusion of democracy in Tanzania, and citizen participation in Tanzania.

2.1 LITERATURE SEARCH AND REVIEW APPROACH

Various information materials like books and journal articles were reviewed throughout the execution of this research project. The information materials were located from different sources of information such as physical and online libraries. Physical libraries are Aberystwyth University Library, National Library of Wales, and REPOA resource centre. Online sources are databases such as Google Scholar, ProQuest Ebook Central, Science Direct, Dawsonera e-Books, Wiley Online Library, and Research for Life.

Various literature search techniques were employed to find relevant information material for this study. For online databases, browsing, simple, advanced and Boolean search techniques were used (Pickard, 2013; Sandelowski & Barroso,

2007). Moreover, browsing physical library shelves, which facilitated to locate critical literature serendipitously, was also employed (Booth, Colomb, & Williams, 2008; Sandelowski & Barroso, 2007).

Searching parameters were set based on the main concepts of this research, which were regarded as keywords (Bryman, 2012; Pickard, 2013; Sandelowski & Barroso, 2007). The main keywords were Diffusion of Innovation theory, information society, informatisation, public participation, citizen participation, citizen engagement, e-participation, online public participation, governance, democracy, e- or online governance, and e-democracy. More keywords, such as openness and responsiveness, emerged during a review of located information materials (Sandelowski & Barroso, 2007).

Literature for this research was selected purposively based on the criteria, which were adapted from Boote and Beile's (2005, p. 8) literature review scoring rubric. The criteria were related to coverage, synthesis and methodology. Other aspects of synthesis and methodology were considered to exclude and include literature in this research. About synthesis, the criteria were a discussion of the existing body of knowledge and identified gaps to fill, provision of historical context and situating the topic in the extensive literature (Boote & Beile, 2005). The excellent example of the research in this study is the one which was conducted by Astrom et al. (2012).

Other aspects were a theoretical framework, conceptualisation and conceptual definitions of main concepts such as e-participation and their measurements (Boote & Beile, 2005). For instance, the study of Astrom et al. (2012) discussed the concepts of democracy, public participation, e-participation and measurement of e-participation. The literature which gave a new perspective (Boote & Beile, 2005) to the adoption of e-participation was also included in the review of the literature.

The literature on the topic of adoption of online public participation, which discussed and used methodologies and research techniques creatively was also included in this study. For example, studies of Bonson, Torres, Royo, and Flores (2012) and Whyte et al. (2006) were included because to a great extent they showed how data were collected and analysed.

Deconstruction of arguments was employed to review the selected literature (Booth et al., 2008; Pickard, 2013; Sumerson, 2014). Deconstruction is the process of dissecting an argument following the ideal structure of a scholarly argument (Booth et al., 2008; Pickard, 2013; Sumerson, 2014). Booth et al. (2008) divide the argument into a claim, reason, warrant, evidence, acknowledgement, response and reservation.

Apart from argument deconstruction, the literature was reviewed based on the approach of writing the abstract (American National Standards Committee Z39, 1971), particularly a six-step formula (Kelsky, 2011). The components of the six-step formula are the identification of a heated debate, identification of gaps, selected gap to fill, methods, main contribution and conclusion (Kelsky, 2011).

In addition to the abstract approach and argument deconstruction, weaving was conducted to finalise the review of the literature. The taxonomy of literature reviews developed by Cooper (1988) was adapted to fulfil the goal of weaving (see Table 2.1).

Table 2.1. A Taxonomy of Literature Reviews

Characteristic	Category
Focus	Research Outcomes
	Research Methods
	Theories
	Practices or Applications
Goal	Integration
	Generalisation
	Conflict Resolution
	Linguistic Bridge-building
	Criticism
	Identification of Central Issues
Perspective	Neutral Representation
	Expousal of Position
Coverage	Exhaustive
	Exhaustive with Selective Citation
	Representative
	Central or Pivotal
Organisation	Historical
	Conceptual
	Methodological
Audience	Specialised Scholars
	General Scholars
	Practitioners or Policymakers
	General public

Source: Adopted from Cooper, 1988, p. 109

The adaptation of Cooper's (1988) taxonomy was instrumental in identifying the research gap, appropriate methodology, conceptualisation, discussion of the findings of this research, and presentation of knowledge contribution. Above all, it contributed to the overall organisation of the review of the literature.

2.2 DEBATE ON THE FACTORS INFLUENCING THE ADOPTION OF E-PARTICIPATION

The debate is the most critical part of this research because it is a ground for the gap this research fills.

Although e-participation appears to be a new practice (Bonson et al., 2012; Holzer & Manoharan, 2016; UN, 2016), there is research that examined the adoption and effect of this practice. However, Kneuer and Harnisch (2016) argue that e-participation studies are fewer than e-government studies. Despite the level of knowledge of effect and adoption of e-participation, there is a debate about the factors which influence the adoption of e-participation, particularly across UN member states.

UN (2018b) argues that over time, the adoption of e-participation has increased across its member states. For example, in the last two UN' surveys, the results indicated that in 2016, the United Kingdom ranked first, Japan second and Australia third (UN, 2016). During 2018, Denmark, Finland and the Republic of Korea were on top of the list followed by Iceland while the United Kingdom ranked fifth (UN, 2018, p. 114). Some countries moved up twenty-five or more positions, including China, Mexico, Montenegro and Serbia who all entered the top 25 while Azerbaijan, Bulgaria, Mauritius, Ukraine Uzbekistan and Vietnam joined the top fifty (UN, 2016). Other countries such as Ethiopia, Paraguay and Zambia moved to higher positions (UN, 2016). Regions also have different positions, for example, in 2016, half of top fifty nations were located in Europe, 28% from Asia, 13% from Americas, 6% from Africa and 4% from Oceania (UN, 2016).

Although the African continent ranked very low, there were three countries (Mauritius, Morocco and Tunisia) in the top fifty (UN, 2016). Moreover, Cape Verde, Ethiopia, Ghana, Kenya, Rwanda, South Africa and Uganda fell in the group of 51-100 (UN, 2016).

On e-information, the findings indicated that most nations provided information on education, health, environment, social welfare and labour through the Internet (UN, 2016, 2018c). For example, a number of countries which did not provide information online dropped from 22 in 2014 to 9 in 2016 (UN, 2016). UN (2016) also revealed that more than half of the nations published data online. Two-thirds of the data, which countries disseminated online, were about education and finance (UN, 2016). Comparing to 2014, except for labour, provision of information on finance, education, environment, social welfare and health has increased (UN, 2016).

Most countries have deployed online engagement features marking e-consultation. It is estimated that since 2014, twice as many nations have adopted e-consultations (UN, 2016). For example, four out of five countries provided opportunities for engagement through social networking facilities, and there were more discussions on education, health and the environment than social welfare and labour (UN, 2016).

The findings regarding the e-decision-making elements showed that fewer countries incorporated online views in the decision-making processes even though e-consultation rose compared to 2014 (UN, 2016, 2018c). Only 20% of member states included online views of citizens in policy, regulation and service decisions (UN, 2016). Focussing on development matters, only 10% of nations made decisions on development issues based on online consultations (UN, 2016).

Focusing on the findings for Tanzania, according to UN's e-participation index, its performance on adopting e-participation has been improving (UN, 2016, 2018c). The performance is measured on a scale of zero to one (UN, 2018c). On this scale, Tanzania scored 0.593 in 2016 (UN, 2016) and 0.618 in 2018 (UN, 2018c). In 2016, it fell into the category of 51-100 positions (UN, 2016), and it was also among the countries which ranked into another group called high (UN,

2016). According to UN (2016), other ranking categories are very high, middle, and low.

The rate of e-information provision rose from 68% in 2016 (UN, 2016) to 83% in 2018 (UN, 2018c) while the degree of e-consultation went up from 63% in 2016 (UN, 2016) to 73% in 2018 (UN, 2018c). With its score on e-information, Tanzania is close to the maturity stage whose threshold is 90%. In 2016, UN recognised the performance of Tanzania in e-consultation as very impressive (UN, 2016). On e-decision-making, it got 14% in 2016 (UN, 2016) and 27% in 2018 (UN, 2018c).

UN (2016, 2018b) highlighted factors which influenced the patterns and magnitudes of adopting e-participation in its member states, including Tanzania. They argued that the degree of complexity of the technology and levels of capacity of Internet users influenced the adoption. Additionally, the proliferation of ICT applications like social media has increased the adoption of e-participation, particularly in low-income countries. Another factor is that as time passes by, e-participation becomes compatible with the needs of people and governments; for example, the increasing demand for transparency and openness. However, for some governments, e-participation might not be compatible with their values as the Internet also has unintended effects.

The digital divide also influenced the adoption of e-participation because e-participation and the Internet are inseparable. Awareness-knowledge is also one of the factors. Leadership commitment as part of the social system/ governments also influenced the adoption of e-participation.

Following the findings of e-participation which is part of the UN e-government surveys, Astrom et al. (2012); and Kneuer and Harnisch (2016) argue that those findings are unwarranted because of measurement issues. The measurement issues are related to the missing of usage in the UN's e-participation research (Astrom et al., 2012). Their main counter-argument is that it is less likely for non-

democracies to adopt e-participation than for democracies because public participation is at the core of democracy (Astrom et al., 2012).

For example, Astrom et al. (2012) discovered that autocracies like Bahrain, Kazakhstan and Malaysia outcompeted democracies such as France, Sweden and Germany, respectively while in Freedom House Index, it was the opposite. However, many democracies had a higher degree of adoption of features than autocracies (Astrom et al., 2012; Kneuer & Harnisch, 2016). Moreover, most democracies adopted many varieties of tools which have a high speed (Kneuer & Harnisch, 2016).

According to Astrom et al. (2012), the main factor which influenced the adoption of e-participation in non-democracies was economic globalisation. They argue that such countries promoted e-participation to look modern and attract more foreign investments. However, this is also one of the drivers for democratic countries to adopt e-participation, but it has less effect on adoption of e-participation by democracies (Astrom et al., 2012). Kneuer and Harnisch (2016) also discovered that the country membership of international and regional organisations like the UN and OECD influenced the adoption of e-participation features.

In response to Astrom et al. (2012); and Kneuer and Harnisch's (2016) arguments, UN (2016, 2018b) argues that they measure e-participation environment rather than the practice. However, UN (2016, 2018b) assumes that measuring the e-participation environment represents measuring of the practice. Moreover, they argue that they do not measure absolute e-participation because doing that is challenging. One may be curious to know that challenge as the UN has not revealed it.

This discussion indicates that there is an incomplete understanding of the magnitude and factors of the adoption of e-participation as practice in Tanzania. The main reason for the lack of that understanding is that the measurement of

the e-participation environment might not represent the practice as accurately as possible. Moreover, the studies of Astrom et al. (2012) and Kneuer and Harnisch (2016) also generated knowledge about the adoption of e-participation features and availability of information on government websites because they used UN' datasets.

2.3 RESEARCH METHODS EMPLOYED IN PREVIOUS STUDIES OF E-PARTICIPATION

In addition to studies of Astrom et al. (2012), Kneuer and Harnisch (2016) and UN (2003, 2004, 2005, 2008, 2010, 2012, 2014, 2016, 2018b), I also reviewed the works of Bonson et al. (2012), Ellison and Hardey (2014), Holzer and Manoharan (2016) and Whyte et al. (2006) to inform the methodologies and research methods of my study.

In these e-participation studies, data were collected from official websites and social media pages of the central government (UN, 2003, 2004, 2005, 2008, 2010, 2012, 2014, 2016, 2018c), and the local government (Bonson et al., 2012; Holzer & Manoharan, 2016; Whyte et al., 2006). These research projects also included a broad range of web 2.0 tools and social media categories. People were also involved in online public participation studies; for example, councillors and citizens (Whyte et al., 2006). Instead of engaging public servants responsible for policy and planning in the UN e-government surveys, the UN involves government officials who are responsible for e-government (UN, 2018c).

Bonson et al. (2012) used Web 2.0 features, which are podcasts, really simple syndication/ rich site summary (RSS), vodcast, real-time webcast event streaming and widgets. UN (2016) also included RSS in their e-participation study.

Popular social media platforms were included in the previous e-participation research. These platforms were Facebook, Twitter (Bonson et al., 2012; Ellison & Hardey, 2014; Holzer & Manoharan, 2016; UN, 2016, 2018), YouTube (Bonson et al., 2012; Ellison & Hardey, 2014; Holzer & Manoharan, 2016), Google blogs,

LinkedIn (Bonson et al., 2012) and Flickr (Ellison & Hardey, 2014). Other interactive tools are a discussion forum, polls (Holzer & Manoharan, 2016; UN, 2016; Whyte et al., 2006) and chat (Holzer & Manoharan, 2016). (Whyte et al., 2006) also included social networking sites, but apart from polls, they did not mention their specific names.

Holzer and Manoharan (2016) included email listserv, bulletin boards and newsletters in their study of digital governance in municipalities worldwide. However, email listserv, bulletin boards and newsletter do not fall within the category of social media used by Ashley, H., Corbett, J., Jones, D., Garside, B., and Rambaldi (2009) and Lipschultz (2015, pp. 43-44).

During this research on e-participation, various approaches were employed to select data sources, which were involved in collecting data. However, some studies involved the entire populations, but they had different stages of getting the units of analysis. Bonson et al. (2012), Ellison and Hardey (2014), Holzer and Manoharan (2016), UN (2016, 2018) and Whyte et al. (2006) used the purposive technique. Whyte et al. (2006) used this technique to select councillors of chosen Scottish Community Councils who participated in the interviews because they were highly involved in the e-community project. However, Whyte et al. (2006) did not show how they selected six Scottish Community Councils from the population of 1,300 councils. This is something that can make replication of the study difficult.

Bonson et al. (2012) and Ellison and Hardey (2014) chose social media purposively based on their popularity globally. Holzer and Manoharan (2016) and UN (2016, 2018c) also selected information categories and interactive tools purposively, but it appears that some interactive tools were self-selected, i.e. they were integrated to the website during the collection of data. For example, In China, Sina Weibo is one of the social networking sites, which was included in the UN e-participation survey based on interactivity rather than worldwide popularity (UN, 2016, p. 65).

Another example is that UN (2016, 2018) employed a purposive sampling approach to get sectors of the central government as the survey focussed on that level of the government. Six sectors, which are education, employment, environment, finance, health and social welfare, were selected (UN, 2016, 2018). UN (2016) argues that these sectors were selected because they are pillars of sustainable development.

Whyte et al. (2006) used voluntary and quota sampling techniques in their study of e-Community Councils in Scotland. Voluntary sampling technique means participants are invited and are willing to take part (Blaxter et al., 2010, p. 170) while quota sampling approach means categories of participants are set before collecting data (Bryman, 2012; McMillan, 2008, p. 123; Neuman, 2014). Voluntary sampling technique was used to select councillors and citizens who took part in the observation while a quota sampling technique was employed to choose citizens who participated in the survey (Whyte et al., 2006). Survey participants were members of a citizen panel of Stirling Council (Whyte et al., 2006).

Data collection methods, which were used in past e-participation, are observation, interviews (Whyte et al., 2006), questionnaire survey (UN, 2016, 2018c; Whyte et al., 2006) and content analysis (Bonson et al., 2012; Ellison & Hardey, 2014; Holzer & Manoharan, 2016; Whyte et al., 2006). Bonson et al. (2012), Ellison and Hardey (2014), Holzer and Manoharan (2016) and UN (2016, 2018c) conducted web content analysis, and Whyte et al. (2006) used web server logs and databases. Ellison and Hardey (2014) and Holzer and Manoharan (2016) terms the web content analysis as a website survey while UN (2016, 2018) considered it as a questionnaire survey. Additionally, as indicated above, the UN also used a questionnaire survey which involved central government officials dealing with e-government (UN, 2018c).

Previous studies of e-participation used some aspects like availability of information (Holzer & Manoharan, 2016; UN, 2003, 2004, 2005, 2008, 2010, 2012,

2014, 2016, 2018c; Whyte et al., 2006), presence of interactive tools (Holzer & Manoharan, 2016; UN, 2003, 2004, 2005, 2008, 2010, 2012, 2014, 2016, 2018c; Whyte et al., 2006) and the use of these two aspects (Bonson et al., 2012; Ellison & Hardey, 2014; Whyte et al., 2006) to measure e-participation adoption within and across nations. Availability of information is related to information which is on government websites. As Tables 2.9 and 2.10 indicate, information is further categorised as downloadable documents, contacts, news and open datasets, to mention a few.

In relation to interactive tools including social media, the presence of interactive tools indicated the adoption of e-participation (Bonson et al., 2012; Ellison & Hardey, 2014; Holzer & Manoharan, 2016; UN, 2016, 2018c, 2003, 2004, 2005, 2008, 2010, 2012, 2014; Whyte et al., 2006). Presence means central and local governments have interactive features such as social media pages including Twitter accounts (Bonson et al., 2012; Ellison & Hardey, 2014). The interactive features can either belong to governments or third parties like Facebook and YouTube platforms (UN, 2016, 2018c).

Bonson et al. (2012), Ellison and Hardey (2014) and Whyte et al. (2006) went further to measure the usage of interactive tools like social media. Whyte et al. (2006) also measured the use of information, which was available on Community Councils' websites. The indicators of usage are activities which are performed by governments and citizens on government websites and interactive tools like Facebook pages (Bonson et al., 2012).

Holzer and Kim (2006, 2008), Holzer and Manoharan (2016) and UN (2016, 2018, 2003, 2004, 2005, 2008, 2010, 2012, 2014) did not include usage to measure e-participation. However, UN (2016, 2018) provides examples of use of e-participation features, but the examples are used to understand nations' strategies to adopt e-participation (UN, 2016).

The activities which indicated the usage of online government information were page requests or hits and visits paid by citizens (Whyte et al., 2006). However, it was not indicated how it was realised that the hits and visits were related to Scottish people unless citizens registered on those councils' websites or IP addresses (Schmidt & Cohen, 2013). Conversations on the interactive features were one of the primary indicators not only of the use of such features, but they also revealed the magnitude of usage (Bonson et al., 2012; Ellison & Hardey, 2014; Whyte et al., 2006). As Table 2.2 depicts, other critical activities are subscriptions, group membership and following.

Table 2.2. Interactive Features Usage Indicators

No.	Interactive feature	Usage indicator
1	Facebook	Number of groups
		Number of members of groups
		Number of page fans
		Activities on the page
		Levels of activities on the page
2	Twitter	Followers
		Tweets
		Lists
		conversations
3	YouTube	Number of subscribers
		Number of conversations
4	LinkedIn	Number of groups
		Number of members

Source: Bonson et al., 2012, pp. 126-127, 129

Although the studies of Bonson et al. (2012), Ellison and Hardey (2014), Holzer and Manoharan (2016), UN (2016) and Whyte et al. (2006) indicated their methods of collecting data, they did not append the instruments they used to their publications. UN (2018) did that only for the member state questionnaire (MSQ). However, they explained the measures in the methodologies, and some

measures were in the analysis, but that was not adequate to illustrate measurement scales. However, for journal articles, it could be challenging to append instruments due to authors' guidelines of individual publications. The absence of instruments in the publications of these studies might prevent other research from adopting or adapting such tools.

The authors of previous e-participation research used primary and secondary data. For example, Ellison and Hardey (2014), Holzer and Manoharan (2016), UN (2016, 2018) and Whyte et al. (2006) used primary data while Astrom et al. (2012) and Kneuer and Harnisch (2016) analysed secondary data, which were collected by UN (2003, 2004, 2005, 2008, 2010, 2012, 2014). Bonson et al. (2012) used both primary and secondary data to conduct their analysis.

They also employed descriptive and statistical tests to analyse primary and secondary quantitative e-participation data. Descriptive analysis were frequencies (Astrom et al., 2012; Bonson et al., 2012; Ellison & Hardey, 2014; Holzer & Manoharan, 2016; Kneuer & Harnisch, 2016; UN, 2016, 2018c; Whyte et al., 2006), and percentages (Astrom et al., 2012; Bonson et al., 2012; Ellison & Hardey, 2014; Holzer & Manoharan, 2016; UN, 2016, 2018c; Whyte et al., 2006). The arithmetic mean, which is one of the central tendency measures, was also used to analyse data (Astrom et al., 2012; Bonson et al., 2012; Holzer & Manoharan, 2016; Kneuer & Harnisch, 2016).

Kneuer and Harnisch (2016) employed a median, which is the central tendency measure and range, which is the disperse measure to compare the distribution of scores as they used a boxplot. A boxplot is a statistical technique to examine the distribution of scores (Pallant, 2013, pp. 81-83). Bonson et al. (2012) used a range and standard deviation, which are measures of dispersing, to analyse their quantitative data.

Statistical tests, which are Pearson and regression tests, were employed to analyse the association between variables (Field, 2013; Pallant, 2013). Bonson et

al. (2012) used Pearson's product-moment correlation coefficient to measure the association between variables such as internet penetration and web 2.0 use by citizens. Astrom et al. (2012) and Bonson et al. (2012) used regression analysis called Ordinary Least Square (OLS). Astrom et al. (2012) measured the effect of variables such as democracy while Bonson et al. (2012) examined the effect of factors like city population and administration styles on the adoption of e-participation.

Whyte et al. (2006) analysed qualitative data which were collected via interviews possibly through coding because it is the only approach for analysing qualitative data (Bryman, 2012; Sandelowski & Barroso, 2007). For instance, Whyte et al. (2006, pp. 50, 59) authenticated their points on access, accessibility and ease of use and perception of the Internet using quotations. In qualitative research, quotations are used to validate the findings (Sandelowski & Barroso, 2007) and distinguish between qualitative and quantitative research (Kent, 2001).

Methodologies and methods of these studies were adapted in this thesis as it examined the e-participation environment and its use in Tanzania.

2.4 A SHORT HISTORY OF DEMOCRACY

Since e-participation is at the core of democracy, understanding the history of democracy is critical in this research. Democracy is one of the forms of government which was recognised and practised in the ancient city-state of Athens in the fourth century Before Christ (BC) (F. Cunningham, 2002; J. V. Cunningham, 1972; Dahl, 2017; Samons, 2004; Thornton, 2014). Other forms of government which were recognised in the fourth century BC are royalty, tyranny, aristocracy, oligarchy and polity (F. Cunningham, 2002; Dahl, 2017).

Over time democracy has evolved from the direct model to a representative one which is sometimes combined with the direct model, but the representative model is dominant (F. Cunningham, 2002; Dahl, 2017). Although the concept of

democracy is contested (Castells, 2009; Economist Intelligence Unit, 2018; Haarck, 2011), the core feature of this form of rule is that as many people as possible participate in making decisions about their affairs independently (F. Cunningham, 2002; Dahl, 2017). In a democracy, the standard approach of reaching a consensual decision is voting, and the decision of the majority is honoured (Dahl, 2017; Thornton, 2014). In direct democracy, every adult citizen takes part in making a decision (F. Cunningham, 2002; Dahl, 2017; Samons, 2004; Thornton, 2014) while in representative democracy people elect a few people to make decisions according to the will of the represented (Gould, 1988, p. 225, as cited in F. Cunningham, 2002; Dahl, 2017; Mainwaring, Bejarano, & Leongomez, 2006).

The evolution of democracy from direct to representative democracy occurred because societies grew from city-states to nation-states (Manin, Przeworski & Stokes, 1991, p. 1, as cited in F. Cunningham, 2002; Dahl, 2017). The characteristics of nation-states which are complexity, large population and geographical size cannot allow people to meet at one place physically and make decisions (Beetham, 1993, pp. 63-66, as cited in F. Cunningham, 2002; Dahl, 2017).

Democracy is also characterised by the institutions which have independent powers, functions, composition and qualifications of people to run such institutions (J. V. Cunningham, 1972; Dahl, 2017; Samons, 2004; Schiller, 2017; Thornton, 2014). For example, during the ancient city-state of Athens, there were two principal organs which were the assembly (J. V. Cunningham, 1972; Dahl, 2017; Samons, 2004; Schiller, 2017; Thornton, 2014) and judiciary (J. V. Cunningham, 1972; Dahl, 2017; Samons, 2004; Thornton, 2014). Furthermore, there were a council of the assembly and public offices (F. Cunningham, 2002; J. V. Cunningham, 1972; Dahl, 2017; Samons, 2004; Thornton, 2014).

The function of the assembly which had a vast independent power (Dahl, 2017) was to set agenda to make decisions (J. V. Cunningham, 1972; Dahl, 2017), and elect magistrates (Samons, 2004). The agenda were prepared by the council,

which was an organ within the assembly (J. V. Cunningham, 1972; Dahl, 2017; Samons, 2004; Thornton, 2014). The council also oversaw financial and military affairs, and its members chaired assembly meetings and headed embassies (Samons, 2004). The judiciary, which also had vast independent power (Dahl, 2017), was checking the assembly, council, magistrates and political leaders (J. V. Cunningham, 1972; Dahl, 2017) while the public offices and boards daily state businesses (Samons, 2004; Thornton, 2014).

The composition of these organs was as follows: the assembly constituted all citizens of the ancient city-state of Athens, the judiciary was staff by jurors (Dahl, 2017; Samons, 2004; Thornton, 2014), and the public offices and boards were run by the magistrates (Samons, 2004; Thornton, 2014). The council consisted of 500 citizens who represented different parts of the state (Dahl, 2017; Samons, 2004; Thornton, 2014).

Except for the members of the assembly, members of other institutions were selected either by vote or lot and held their positions for a year (Dahl, 2017; Samons, 2004; Thornton, 2014). The minimum primary qualifications for becoming members of these institutions were Athenian citizenship and male aged 18 (Dahl, 2017; Samons, 2004; Thornton, 2014). Citizenship was by birth and genetic basis (Dahl, 2017; Samons, 2004; Thornton, 2014).

As indicated earlier, currently the two models of democracy are combined to fulfil the will of the people and abide by the main principle of democracy which is citizen participation (J. V. Cunningham, 1972; Ventriss, 1985). With the advancement of ICT, it is believed that the problem of distance and physical space could be reduced (Castells, 2009; Chadwick, 2013; J. V Cunningham, 1972; UN, 2016). However, it is argued that direct democracy is still challenging as the public decision-making processes require knowledgeable, intelligent, wise and moral people (J. V. Cunningham, 1972; Dahl, 2017; Ventriss, 1985).

During the 20th and 21st centuries, democracy was adopted in different countries around the globe (Dahl, 2017). It is estimated that the governments of half of the world's population include primary institutions of representative democracy (Dahl, 2017). However, there are full and partial democracies (Economist Intelligence Unit, 2016). Moreover, social systems of different countries influence the diffusion, adoption and routinising democracy (Dahl, 2017).

As Table 2.3 indicates, it is argued that, at the moment, democracy has more relative advantages than other forms of government. However, it is not immune to challenges such as the economic crisis (Dahl, 2017). Following this argument, the UN promotes the diffusion of democracy to its member states to meet its vision of a prosperous world (Haarck, 2011; UN Development Fund, 2002).

Table 2.3. The Values of Democracy against other Forms of Government

Aspect	Value	Notes
Rule	Better rule	It prevents cruelty and perpetual autocratic leadership
War	Least option	Democracies do not fight each other
Prosperity	More prosperity	Most measures of prosperity indicate that most democracies are more prosperous than nondemocracies.
Human development	More development	Most democracies have higher development than autocracies, for example, in aspects such as health and education.
Fundamental interests	More favoured	Democracies favour the interests of people
Fundamental rights	More guaranteed	Democracies tend to promote basic human rights
Policy choices and legislation	More citizen orientated	Democracies give more opportunities to their citizens to choose policies and laws
Moral responsibility	More citizen orientated	In democracies, citizens are morally responsible for their decisions and policy choices

Aspect	Value	Notes
Political equality	More equality	In democracies, citizens have equal chance to participate in political matters
Personal freedom	More freedom	Democracies guarantee more personal freedom than non-democracies unless it affects other citizens

Source: Dahl, 2017

2.5 DIFFUSION OF DEMOCRACY IN TANZANIA

Tanzania started to practise democracy a few years before independence (Grawert, 2012). However, during that time, democracy covered only multi-party, regular elections and restricted suffrage (Jamhuri ya Muungano wa Tanzania, 2013b). The United Kingdom influenced the diffusion and adoption of democracy in Tanzania before and right after independence because Tanzania was one of the United Kingdom's colonies (Grawert, 2012).

Before and after the independence of Tanzania Mainland and Tanzania Zanzibar, but before 1965, different political parties were established, and general elections were conducted (Ewald, 2011). For example, in Tanzania Mainland, political parties were African National Congress (ANC), TANU, and United Tanganyika Party (UTP) (Grawert, 2012; Jamhuri ya Muungano wa Tanzania, 2013b). Other parties were African Independence Movement (AIM), All Muslim National Union of Tanganyika (AMNUT), National Enterprise Party (NEP), People's Convention Party (PCP), People's Democratic Party (PDP) (Jamhuri ya Muungano wa Tanzania, 2013b). In Zanzibar, political parties were ASP, Zanzibar Nationalist Party (ZNP), Zanzibar and Pemba People's Party (ZPPP), Umma Party and Muslim Association (Ewald, 2011; Shivji, 2008).

After independence, in 1965, both parts of the country changed their political system from a multiparty to a single-party system (Grawert, 2012; Jamhuri ya Muungano wa Tanzania, 2013b). The main reasons for pursuing a single party system were to build the nation and unite citizens who were deeply divided due

to pre-colonial and colonial institutional arrangements (Ewald, 2011; Nyerere, 1973; Shivji, 2008).

The multiparty system was restored in Tanzania in 1992, and the first general elections were conducted in 1995 (Ewald, 2011; Grawert, 2012; Jamhuri ya Muungano wa Tanzania, 2013b; Lofchie, 2014). The influence of reverting to a multiparty system was poor governance and economic performance, and the Washington Consensus, the collapse of the Berlin Wall (Grawert, 2012; Shivji, 2006), and membership to international bodies like the UN (Grawert, 2012). Lofchie (2014) argues that it is evident that the Washington Consensus had a more significant effect on re-adopting the multiparty system.

Fundamental rights such as political rights and civil liberties are part of the principles of democracy (F. Cunningham, 2002). During the period between 1961 and 1984, the constitutions of Tanzania did not have a Bill of Rights (Peter, 1997, as cited in Grawert, 2012). However, people were encouraged to participate in political affairs (Grawert, 2012; Jamhuri ya Muungano wa Tanzania, 2013b). Zanzibar independence constitution had a Bill of Rights, but after the revolution, it was not incorporated again in the governance of the country (Jamhuri ya Muungano wa Tanzania, 2013b).

Some fundamental rights were introduced in the 1977 Constitution when it was amended in 1984 for the fifth time (Jamhuri ya Muungano wa Tanzania, 2013b). More fundamental rights were incorporated in that constitution during the fourteenth amendments which took place in 2005 (Grawert, 2012; Jamhuri ya Muungano wa Tanzania, 2013b; United Republic of Tanzania, 2005). Some of these rights, which are related to citizen participation, are freedom of opinion and expression, right and freedom of participation in public affairs (United Republic of Tanzania, 2005). Another right is to seek and receive information and get informed about matters and activities performed by people (United Republic of Tanzania, 2005).

The exclusion of the fundamental rights, which are intricate with democracy (F. Cunningham, 2002), raises questions about citizen engagement. One might want to know how citizens could participate in policy-related matters while they did not have the right and freedom of participation, freedom of expression and right and access to information. One may also question whether the exclusion of fundamental rights during the period between 1961 and 1984 was an inclusive and consensual decision. The answers to these questions could provide more knowledge of the diffusion of democracy in Tanzania.

Grawert (2012) and Lofchie (2014) argue that although Tanzania adopted democracy, it has never practised it to a full extent. The series of Democracy Index supported this claim because Tanzania scored an average of five and a half points on a scale of 0-10 during the period between 2006 and 2018 (Economist Intelligence Unit, 2014, 2016, 2018, 2019). The variables that constituted the index were political culture, civil liberties, government performance, electoral process and pluralism, and political participation (Economist Intelligence Unit, 2014, 2016, 2017, 2018, 2019). With that average score, Tanzania falls in the hybrid democracy or hybrid regime category (Economist Intelligence Unit, 2014, 2016, 2017, 2018, 2019).

This synthesis of democracy in Tanzania since its independence illustrates the adoption, discontinuation and re-adoption of democracy. The illustration tries to enrich the context of this research.

2.6 CITIZEN PARTICIPATION IN TANZANIA

Over time the government has provided information and engaged citizens in decision-making processes such as policy choices and adoption of new and constitutional amendments.

2.6.1 Provision and access to information

Despite the government's initiatives and commitments to improve access to information in Tanzania, citizens do not get government information as easily as it is anticipated based on the government's promises (Ally, 2007; Chachage, Kyando, & Rajani, 2005). The government showed initiative and commitment by establishing government communications units in the statehouse and government ministries (Chachage et al., 2005). With those initiatives and commitments, the government is determined to improve citizen participation (Ally, 2007; Chachage et al., 2005), which includes the provision of government information (Organisation for Economic Cooperation and Development, 2009).

Ally (2007) and Chachage et al. (2005) argue that the factors, which influence the adoption of access to government information, are complex information systems, social network and government social structure. Other factors are government norms, consequence and compatibility, particularly perceptions of government officials of the need to give information to citizens.

The studies of Ally (2007) and Chachage et al. (2005) are critical for this research because they examined access to information in Tanzania. Moreover, the research sheds light on the adoption of an offline version of one of the components of e-participation, which is e-information. Ally (2007) suggests the adoption of the website to improve access to information in Tanzania. However, in 2007, the pace of the adoption of e-information was also slow (Ally, 2007).

The findings of the baseline and follow-up research revealed that it was very challenging for citizens to access government information physically and online. The baseline indicated that it took about 29 days to get a response from the central government, in most cases, after sending several reminders. Additionally, the physical visit was a more appropriate means of obtaining information than written requests.

The findings of the follow-up research were in line with the results of the baseline study (Ally, 2007). The responsiveness increased by 2% from 32%; the response satisfaction rate grew by 5% from 25% (Ally, 2007). It was also revealed that a physical visit was preferred to other communication channels such as emails and letters (Ally, 2007). Additionally, for the government, website preference was nearly zero (Ally, 2007).

According to the principle of research design, the findings of the baseline study were not supposed to be generalised because the samples were selected purposively (Bryman, 2012; Neuman, 2014). Even though the sample size of government ministries was big (Chachage et al., 2005), a generalisation of the findings could not be made because it was not a probability sample. Additionally, even the sample of citizens did not warrant generalisation of the findings because it was selected purposively (Bryman, 2012; Neuman, 2014).

2.6.2 Citizen engagement in public consultations and decision-making

Over time, the Government has involved citizens in decision-making processes (United Republic of Tanzania, 2012). Those decisions were about public affairs such as a political system change, critical issues on sovereignty, constitutional change and amendments, policy formulation and reviews (Jamhuri ya Muungano wa Tanzania, 2007, 2013b; United Republic of Tanzania, 1994, 2012, 2016a).

As indicated above, during 1991, citizens were consulted on whether to revert to the multiparty system or to continue with the single-party system (Grawert, 2012; Lofchie, 2014; United Republic of Tanzania, 2012). A total of 36,000 citizens from all regions participated in that consultation (Ewald, 2011; Grawert, 2012). Most citizens (77%; n=27,720) suggested to continue with a single-party system with the condition of improving democracy and participation, but the government decided on the multi-party system (Ewald, 2011; Grawert, 2012; Lofchie, 2014). The likely reason for the government to implement the decision of the minority, as suggested by Lofchie (2014) was already given above. However, that decision

was based on one of the recommendations of the President's Commission (Shivji, 2006).

During 2007, the citizens of Tanzania were consulted on Fast-Tracking EAC political federation (Jamhuri ya Muungano wa Tanzania, 2007). The EAC was established in 1999, and the member states are Burundi, Kenya, Rwanda, South Sudan, Tanzania and Uganda. The sequential pillars of the EAC charter are a customs union, common market, a single currency and political federation (EAC, 2018). The heads of states proposed to introduce the federation earlier than they planned, but they involved the country's citizens in that decision-making process because it was a sovereign issue (EAC, 2018).

During this citizen participation, as Table 2.4 shows, a total of 18,321 people gave their views. The decision favoured the majority who proposed to follow the original time frame and accomplish the other milestones to avoid significant disparities in the community (Jamhuri ya Muungano wa Tanzania, 2007). This process shows that the citizens did not participate in the final decision as there was no binding referendum.

There were different means of communication which were employed during this exercise, as Table 2.4 shows. These ways were traditional mass media such as radio, open meetings, print questionnaire and letters (Jamhuri ya Muungano wa Tanzania, 2007). Online submission form was also used on the official website, which is one of the new media (Jamhuri ya Muungano wa Tanzania, 2007). The paper questionnaire and opening meeting were primarily used in this process, as Table 2.4 indicates, but someone may want to know about the way the committee administered the questionnaire.

Table 2.4. Media Used in EAC Political Federation Fast-tracking Consultation

Medium of consultation	Citizen	%
Letter	15	.08
Newspaper	307	1.67
Official website	61	.33
Open meeting (face-to-face and written views)	8,361	45.6
Print questionnaire	9,519	51.9
Radio and TV	58	.32
<i>N</i>	18,321	100

Source: Adopted from Jamhuri ya Muungano wa Tanzania, 2007, p. 14

There were also a series of constitutional reviews and amendments in the Union and Zanzibar constitutions since independence. During 1984, the constituent assembly amended the constitution of 1977 for the fifth time, and there were many changes (Jamhuri ya Muungano wa Tanzania, 2013b). During this process, the government prepared amendment proposals which were passed on to citizens to comment on for nine months (Jamhuri ya Muungano wa Tanzania, 2013b). Some of the amendments were the introduction of fundamental rights, local government and the cooperatives union (Jamhuri ya Muungano wa Tanzania, 2013b).

In 2010, Zanzibaris participated in the referendum on the tenth Constitution amendments to their Constitution (Jamhuri ya Muungano wa Tanzania, 2013b). Before 2010, there was political turmoil due to a small margin of victory in the general election. An international mediation committee was established to resolve that political issue. One of the recommendations of the committee was to form a coalition government when the margin of winning the elections is small. These changes led to the amendment of the Zanzibar constitution and citizens decided through a referendum (Jamhuri ya Muungano wa Tanzania, 2013b).

During 2012 and 2013, the Constitution of 1977 was reviewed (Jamhuri ya Muungano wa Tanzania, 2013b; United Republic of Tanzania, 2012). Citizens were

also engaged in the review (Jamhuri ya Muungano wa Tanzania, 2013b; United Republic of Tanzania, 2012). Unlike the EAC political federation fast-tracking decision process, the Parliament passed the law that guided this review exercise (Jamhuri ya Muungano wa Tanzania, 2013b; United Republic of Tanzania, 2012). According to the Constitutional Review Act, 2011, the process had four main linear stages, and different people, institutions and interest groups were involved (United Republic of Tanzania, 2012).

There were various steps during the constitutional review process. The first two steps of the process comprised a collection of views from individuals, interest groups and organisations, and review of the first draft by constitutional review councils (Jamhuri ya Muungano wa Tanzania, 2013b). The third stage was to table the second draft in the Constituent Assembly which comprised of representatives from different organisations, interest groups and political parties (Jamhuri ya Muungano wa Tanzania, 2013b; United Republic of Tanzania, 2012). The last stage was to run the binding referendum (United Republic of Tanzania, 2012). The first three steps were accomplished (Jamhuri ya Muungano wa Tanzania, 2014a), but the government deferred the binding referendum to an unspecified date due to a delay in updating a national voter's register (Dausen, 2015).

Since this study focuses on individual participation, I included only the response rate of individual participants, and the means of communication which people used during the review. As Table 2.5 indicates, there were about 350,000 citizens who participated in the review process. It appears that their views were not binding because the Constituent Assembly made significant changes in the first draft of the constitution (United Republic of Tanzania, 2012). However, the citizens would make a final decision on the final draft of the proposed constitution during the binding referendum (United Republic of Tanzania, 2012).

These citizens used a variety of approaches to communicating their views. They used open meeting, letters, Short Messaging Service (SMS), email, Facebook and

online submission form, as Table 2.5 indicates. Unlike the EAC political federation fast-tracking consultation, the review commission used more new media channels than traditional approaches because of high diffusion and adoption of mobile telephony and the Internet (Jamhuri ya Muungano wa Tanzania, 2013c, 2013d). The print questionnaire was not one of the means to collect views of the people (Jamhuri ya Muungano wa Tanzania, 2013c, 2013d).

Table 2.5. Media Used in Constitutional Review Consultation

Means of Consultations	Citizens	%
Email	3,058	.9
Facebook page	2,729	.8
Letter	7,246	2
Official website	6,703	1.9
Open meeting (face-to-face and written views)	323,001	91.8
SMS	8,631	2.5
Special group meetings	296	.1
<i>N</i>	351,664	100

Source: Adopted from Table 5 by Jamhuri ya Muungano wa Tanzania, 2013c, p. 207

Since the attainment of independence, the government also formulated and reviewed national policies. According to the Constitution of the United Republic of Tanzania, the government must formulate and review national policies (United Republic of Tanzania, 2005). Policy, which is subject to revision from time to time, is a feasible solution to a problem (Hyder, 1984). For example, citizens were engaged in a land policy review in 1991 and 1992 to inform land and settlements legislations (United Republic of Tanzania, 1994). During this citizen participation, 45,000 people were engaged (United Republic of Tanzania, 1994). The means of collecting views in this consultation were written memorandum, open meeting and interviews (United Republic of Tanzania, 1994). It appears that their opinion influenced new land laws, for example, the courts (Land Disputes Settlements) Act of 2002. However, structured research was also used to inform the legislation (United Republic of Tanzania, 1994).

Following the discovery of oil and gas in the country, the Ministry of Energy and Minerals formulated the local content policy of Tanzania for the oil and gas industry in 2014 (Ministry of Energy and Minerals, 2014). The public was invited to give their views on the draft policy (Ministry of Energy and Minerals, 2014). The ministry published the invitation on their website and in the newspapers (Ministry of Energy and Minerals, 2014). The means of collecting the views of the people were email, physical visit and post (Ministry of Energy and Minerals, 2014).

Although the government has given physical and online participation opportunities, online opportunities were fewer than the physical ones. Moreover, a few people utilised online opportunities. This trend contradicts the findings of e-consultation in UN surveys. That contradiction also warrants this investigation.

2.7 THEORETICAL FRAMEWORK

As highlighted in the introduction chapter, the Diffusion of Innovation theory underpinned the explanation of the factors which influence the adoption of e-participation in Tanzania. I selected it because e-participation is an innovation (Astrom et al., 2012; Bonson, Torres, Royo, & Flores, 2012; Chadwick, 2013; Kneuer & Harnisch, 2016; Organisation for Economic Cooperation and Development (OECD), 2009; UN, 2014, 2016). Moreover, Kneuer and Harnisch (2016) used it to study the diffusion of e-government and e-participation tools within and across regime types and sub-types.

The theory has main assumptions and some empirical evidence for such propositions, but most evidence comes from the research on the association between innovation features and rate of adoption (Rogers, 2003). The first central assumption is that the process of innovation-decision has five main stages, which are awareness-knowledge, persuasion, decision, implementation, and confirmation (Rogers, 2003; Rogers & Shoemaker, 1971). The duration of this process is dependent on factors like innovation features (Rogers, 2003; Rogers & Shoemaker, 1971). Awareness-knowledge involves getting information about the

innovation while persuasion entails forming, evaluating and changing attitudes towards the innovation (Rogers, 2003; Rogers & Shoemaker, 1971). The decision involves accepting or rejecting the innovation, while implementation means using the innovation, and confirmation is all about seeking further information about the benefits which reaffirm or undermine the decision (Rogers, 2003; Rogers & Shoemaker, 1971).

Although awareness-knowledge is the first stage of the innovation-decision process, it also influences the adoption of innovation (Rogers, 2003; Rogers & Shoemaker, 1971). However, it does not guarantee the adoption because there are other factors and subsequent stages (Rogers, 2003).

Rogers (2003) illustrates the existence of the five stages of the innovation-decision process using three studies. The Iowa study indicated that all 148 Iowa farmers went through all stages when adopting weed spray, and 63% of these farmers passed all stages while adopting new livestock feed. None of them skipped any of the first three stages (Beal & Rogers, 1960, as cited in Rogers, 2003). Likewise, the research on the adoption of team teaching, language lab, and flexible scheduling showed that all 58 Oregon school superintendents passed all five stages (Kohl, 1966, as cited in Rogers, 2003). Similarly, 262 California school teachers from 20 schools went through all five stages (LaMar, 1966, as cited in Rogers, 2003).

The innovation-decision process in the organisation also follows the principles of the model of five stages, but the stages are labelled differently. Except for the decision, the steps of the process are agenda-setting, matching, redefining or restructuring, clarifying, and routinising (Rogers, 2003). Zimmerman, Yeatman, Jones and Murdoch (2015) found that the Republic of Kiribati followed this process to adopt the infection prevention and control program (IPCP). In the agenda-setting, the institution becomes aware of the need for innovation (Rogers, 2003). For example, Wildemuth (1992) as cited in Rogers (2003) studied

43 innovations in three large corporations and discovered that they identified their problems rationally. Zimmerman et al. also illustrate that the Republic of Kiribati identified and prioritised the need to adopt IPCP to solve the problem of infectious diseases.

In the matching stage, the organisation evaluates whether the innovation matches their need. The study of Goodman and Steckler (1989) as cited in Rogers (2003) showed that match with a need is essential for the sustainability of the programme in a health organisation. Zimmerman et al. (2015) discovered that severe acute respiratory syndrome (SARS) prompted the Republic of Kiribati to match IPCP with the problem of the infectious disease.

During redefining or restructuring, the organisation alters the innovation or its structure to suit the adoption (Rogers, 2003). The structure is the patterned arrangements of the units in a system (Rogers, 2003). For example, public schools modified educational innovations and their structure to suit the adoption of such innovations (Berman & McLaughlin, 1974, 1975, 1978 as cited in Rogers, 2003; Berman et al., 1975, 1977, as cited in Rogers, 2003). During the adoption of IPCP, an Infection Control Committee (ICC) was established, and the position of infection control principal nursing officer was introduced (Zimmerman et al., 2015).

In the clarifying stage, it reinforces the innovation messages to catalyse the implementation. For instance, the no-smoking ordinance in Aamogordo, New Mexico, 2002, was voted down because of misunderstandings of the benefit of no-smoking (Rogers, 2003). Zimmerman et al. (2015) found that IPCP was clarified by establishing education programmes, developing quality indicators, and specialist consultation and advice.

Routinising marks the end of the innovation-decision process because staff use the innovation regularly as part of the core business (Rogers, 2003). For example, O'Loughlin and colleagues (1998) as cited in Rogers (2003) discovered that public

health departments and others in Canada institutionalised 189 heart disease prevention interventions. Their discovery was consistent with the findings of Goodman and Steckler (1989) as cited in Rogers (2003) and Smith, Redican and Olsen (1992) as cited in Rogers (2003). Zimmerman et al. (2015) also discovered that activities of IPCP became part of everyday tasks.

The second primary assumption is that the perceived innovation features, communication channels, characteristics of the social system, and innovation-decision type explain the variance of the rate of adoption of innovation (Rogers, 2003; Rogers & Shoemaker, 1971). Individual people and organisations features, networks, influencers, consequence, and a degree of the promotion efforts of the change agents also influence the adoption of an innovation (Rogers, 2003).

The innovation has five main attributes, which are relative advantage, compatibility, complexity, trialability, and observability (Rogers, 2003; Rogers & Shoemaker, 1971). Relative advantage is the scale to which an individual or organisation perceives the innovation has more margins of benefits than the existing one (Rogers, 2003; Rogers & Shoemaker, 1971). Compatibility is the degree to which the innovation is perceived to be in line with the values, past experience, and needs of the adopters (Rogers, 2003; Rogers & Shoemaker, 1971). Complexity is the extent to which innovation is difficult to use unless someone acquires new skills (Rogers, 2003; Rogers & Shoemaker, 1971). Trialability is about whether innovation can be tested on a small scale, but some innovations cannot be tested (Rogers, 2003; Rogers & Shoemaker, 1971). Observability is the degree to which someone can witness the innovation results physically, but some innovations are not readily observable (Rogers, 2003; Rogers & Shoemaker, 1971).

Diffusion research also supports the theory that perceived innovation features influence the rate of adoption of innovation (Rogers, 2003). For example, Holloway (1977) as cited in Rogers (2003) studied perceptions of 100 high school

principals of educational innovations, and results were consistent with the five perceived innovation attributes, but there was no clear demarcation between relative advantage and compatibility. The sixth attribute, which is status, was revealed, but according to Rogers (2003), this aspect is related to relative advantage.

Gary C. Moore and Izak Benbasat (1991) as cited in Rogers (2003) discovered that adopters of Information Technology (IT) and personal workstations scored higher on relative advantage, compatibility, trialability and observability than complexity. Gary and Izak (1991) as cited in Rogers (2003) also added three features which are voluntariness, image and results demonstrability, but Rogers (2003) finds the last one to be like observability. Goldman (1992) as cited in Rogers (2003) also found that 116 directors of March of Dimes chapters perceived that compatibility, simplicity, relative advantage and observability influenced the adoption and implementation of Campaign for Healthier Babies.

Kneuer and Harnisch (2016) also found that autocratic and democratic nations adopted e-government and e-participation tools because of the perceived relative advantage, which is legitimacy. Kneuer and Harnisch provide some examples of legitimacy, which are economic development, modernity, symbolism, and efficiency in the administration and delivery of services.

Modification, clustering and interactivity of the innovations also influence the rate of adoption of the innovations (Rogers, 2003). Modification is the possibility of altering the innovation to best suit the needs of the adopter (Rogers, 2003). The study of Berman and Pauly (1975) as cited in Rogers (2003) showed that public schools altered educational innovations before they adopt them. Innovations clustering is a combination of innovations. For example, the consumer telecommunication innovations research showed that email and personal computer (PC) cluster together (LaRose & Atkin, 1992, as cited in

Rogers, 2003, p. 276). IPCP is also an example of an innovation cluster because it involved policies, strategies and activities (Zimmerman et al., 2015).

Interactivity is the degree to which the adopters depend on each other to continue with the adoption (Rogers, 2003); for example, the adopters of interactive communication innovations like social media (Castells, 2009; Lipschultz, 2015). Rogers (2003) uses the term interactivity and a reciprocal interdependence interchangeably.

Communication has two main categories, which are mass and interpersonal communication channels (Rogers, 2003; Rogers & Shoemaker, 1971). Communication is the process of creating and sharing information to reach a mutual understanding (Rogers, 2003), but one may wonder whether simply creating information without sharing it is also communication. Mass communication channels like radio and TV are more effective and efficient in informing the broader audience about innovation than interpersonal channels (Rogers, 2003; Rogers & Shoemaker, 1971).

In contrast, the interpersonal communication channels like a telephone and face-to-face conversation are more critical for persuasion than the mass media (Rogers, 2003; Rogers & Shoemaker, 1971). For example, Sill (1958), Beal and Rogers (1960) as cited in Rogers (2003), discovered that mass media played a significant role in awareness-knowledge while the interpersonal communication did in persuasion. However, in places where there is limited mass media like Colombian and Bangladesh villages in the 1960s, interpersonal communication also plays a significant role in awareness-knowledge (Deutschmann & Fals Borda, 1962b, as cited in Rogers, 2003; Rahim, 1961, 1965, as cited in Rogers, 2003).

Interpersonal communication can occur between people with similar or different socio-economic, political and cultural qualities (Rogers, 2003; Rogers & Shoemaker, 1971). Interpersonal communication for people with similar qualities is called homophilic, while that of those with different aspects is heterophilic

(Rogers, 2003; Rogers & Shoemaker, 1971). The former allows a high flow of information, but with a limited transfer of innovation while the latter has a limited flow of information, but it is critical for the transfer of innovation (Rogers, 2003). Following these differences, homophilic communication contributes to a high rate of diffusion of innovation more than a heterophilic one (Rogers, 2003; Rogers & Shoemaker, 1971).

As Table 2.6 indicates, features of individual people are education, income, knowledge, courage, persuasive power, interaction, modernity and exposure. All these features are related to the degree to which someone possesses such qualities (Rogers, 2003; Rogers & Shoemaker, 1971).

Table 2.6. Five Categories of Adopters with their Features

Category	Characteristics
Innovators	Audacious, more cosmopolite, knowledgeable, daring, rash, well-off, risk-takers, gatekeepers, norm violators, and less respected.
Early adopters	Esteemed, localites, prudent, and high opinion leaders, providers of approval/disapproval.
Early majority	Deliberate and interpersonal communication network nodes.
Late majority	Doubtful, less well-off, and limited resources.
Laggards	Traditional, most Localites, least well-off, and isolated from networks.

Source: Rogers and Shoemaker, 1971

Likewise, aspects of individual organisations are the attitude towards innovation, centralisation, complexity, formalisation, interconnectedness, financial resources, size, and openness (Rogers, 2003). In this context, complexity means staff have immense knowledge and expertise (Rogers, 2003). Centralisation means a few people have power and control, while formalisation is defined as a strict following of rules and procedures (Rogers, 2003). Interconnectedness means units of the social system are linked with interpersonal networks and size is related to a number of members of staff (Rogers, 2003). With these features of the institution,

only centralisation and formalisation affect the rate of adoption of the innovation (Rogers, 2003).

Individual people and organisations also form networks such as professional bodies (Rogers, 2003). The effects of these networks influence the rate of adoption of innovation at the individual level (Rogers, 2003). Technically, the effects are network externalities and turbocharger (Rogers, 2003). Network externalities means that the perceived benefits of the innovation become clear as many members adopt the innovation, particularly for observable innovations (Mahler & Rogers, 1999, as cited in Rogers, 2003). The example, of network externalities, was the adoption of the Internet in North America in the 1990s (Rogers, 2003).

The turbocharger means members adopt the innovation because of a high degree of the flow of information and discussion about the innovation (Mohammed, 2001, as cited in Rogers, 2003). Although the theory does not state what turbocharger means initially, the turbocharger effect could be an analogy of an internal combustion engine device for engine power and efficiency increase (Ferguson & Kirkpatrick, 2015, pp. 150-158). The device operates optimally only at high speed because it is connected to the turbine, which uses waste gas from the engine to rotate (Ferguson & Kirkpatrick, 2015, pp. 150-158).

Kneuer and Harnisch (2016) also discovered that the networks of nations influenced the adoption of e-government and e-participation tools such as social media. For example, at the international level, the UN promotes and evaluates the adoption of features like e-payment and e-petition (Kneuer & Harnisch, 2016). There are also regional networks because of related qualities such as geographical location, historical and cultural backgrounds, and the same regime types or compatible regime types (Kneuer & Harnisch, 2016). Two examples of regional networks are the Shanghai Cooperation Organisation (SCO) and the Gulf Cooperation Council (GCC) (Kneuer & Harnisch, 2016).

Mekonnen, Gerber, and Matz (2018) investigated the existence and effects of social networks on adopting agricultural practices in Ethiopia. Mekonnen et al. found that social networks like funeral groups influence the adoption of innovation. Mekonnen et al. gave an example of women's social networks, which increased the flow of information and adoption of row-planting and productivity. The social system comprises the structure, norms, influencers, and innovation-decisions (Rogers, 2003; Rogers & Shoemaker, 1971). Innovation-decisions may be either optional, authority, collective or contingent, which is a combination of either of the first three (Rogers, 1983, pp. 29-31, 2003, pp. 53-56; Rogers & Shoemaker, 1971). As Table 2.7 shows, the uncombined innovation-decisions have some similarities and differences due to speed, sustenance, implementers and enforcement of implementation. Norms are established behaviour patterns for members of the social system (Rogers, 2003; Rogers & Shoemaker, 1971) or a range of tolerable behaviour and guide to standard behaviour (Rogers, 2003). The example of the influence of social system on diffusion is the adoption of contraceptive methods in non-secular states, where religious belief values and norms are against non-natural family planning (Rogers, 2003).

Table 2.7. Similarities and Differences of Uncombined Innovation-decisions

Aspect	Innovation-decision		
	Optional	Authority	Collective
Speed	Fast	Fast	slow
Sustenance	Enduring	Less enduring	enduring
Implementers	Decision-maker	Non-decision-makers	Decision-makers
Implementation enforcement	No surveillance	surveillance	No surveillance

Source: Rogers, 2003; Rogers and Shoemaker, 1971

Optional innovation-decision is the choice which is made by an individual to adopt or reject an innovation without interfering with social system norms (Rogers, 2003). The example, of optional innovation-decision, is that of Iowa

farmers who decided to either adopt or reject hybrid corn seeds independent of the social system (Ryan & Gross, 1943, as cited in Rogers, 2003).

Authority innovation-decision is the choice which is made by an individual or a unit to adopt or reject an innovation (Rogers, 2003; Rogers & Shoemaker, 1971). The unit or the individual makes such a decision because they have power, status or technical expertise (Rogers, 2003; Rogers & Shoemaker, 1971). The example of this category of innovation-decision is that the Nokia Chief Executive Officer (CEO) decided that employees should not send out an email attachment because of security issues (Rogers, 2003). The Republic of Kiribati also made an authority innovation-decision to adopt IPCP because a unit of senior staff with authority did it (Zimmerman et al., 2015).

Collective innovation-decision is related to a choice which is made by many members of the social system. The example of this innovation-decision is the passing of no-smoking legislation by the US city and municipal councils in the 1990s (Rogers, 2003). The example of contingent innovation-decision is the change of the US 1974 legislation of the seat belt / ignition interlock system to non-interlocking system to let drivers make an optional innovation-decision (Rogers, 2003).

In informal and formal social systems, some members influence innovation decisions (Rogers, 2003). These members are called champions in the formal setting and opinion leaders in the casual arena (Rogers, 2003). Kneuer and Harnisch (2016) indicate that Russia is leading in spreading e-participation features like the national portal in the post-Soviet Union sphere, and information security in the UN. Likewise, Bahrain and the United Arabs Emirates (UAE) influence the adoption of e-government and e-participation features in the Gulf region (Kneuer & Harnisch, 2016). Zimmerman et al. (2015) found that the members of ICC who came from various healthcare fields were champions.

The consequence of innovation can also influence the adoption of innovation. However, the innovation can have both desired, undesired and unexpected outcomes (Rogers, 2003; Rogers & Shoemaker, 1971). For example, the introduction of iron axes in one of the Australian Aboriginal communities, Yir Yoront, increased productivity due to efficiency while it disrupted sex roles (Sharp, 1952, as cited in Rogers, 2003).

Change agents are technical people who influence the diffusion of innovation in the social system to which they do not belong (Rogers, 2003; Rogers & Shoemaker, 1971). They perform that duty on behalf of change agencies, which may be any source of innovation (Rogers, 2003). For example, change agents distributed condoms to commercial sex workers in Nairobi during a human immunodeficiency virus (HIV) prevention programme in Pumwari area (Rogers, 2003).

Over time the theory has evolved because of the growing body of knowledge of process and factors influencing the diffusion of innovation and theoretical debate about the theory (Rogers, 2003). Rogers (2003) encourages diffusion researchers to criticise the theory for improving it.

For example, Lyytinen and Damsgaard (2001) criticise six assumptions of the theory (see Table 2.8) because it does not explain the process and factors of adoption the electronic data interchange (EDI) adequately. EDI is an exchange of business documentation by electronic means (Sloane, 2005, p. 285). Lyytinen and Damsgaard argue that the innovation-decision process has more than one decision at a time, and some innovations are not well-defined like television (TV) and pesticides. Moreover, Lyytinen and Damsgaard state that the population of would-be adopters is heterogeneous and innovation features, communication channels, time, and social system are not factors that influence the adoption of innovation.

Table 2.8. Diffusion of Innovation Assumptions and their Sources

No.	Proposition	Reference
1	Technologies are discrete packages developed by independent and neutral innovators	Hai (1998); Premkumar, Ramamurthy and Nilakanta (1994); Rogers (1995); Tornatzky and Klein (1982).
2	Technologies diffuse in a homogeneous fixed social ether called diffusion arena, which is separate from the innovation locale	Mahajan, Muller and Bass (1990).
3	The diffusion rate is a function of push and pull forces	Thirtle and Ruttan (1987).
3.1	Push factors include features of technology and channels of communication	Mahajan, Muller and Bass (1990); Rogers (1995).
3.2	Adopter's rational choices determine the pull	Rogers (1995).
4	Adoption decisions are dependent on available information, preference functions and adopter's properties	Rogers (1995).
5	Diffusion traverses through distinct stages, which exhibit little or no feedback	Nolan (1973); Nolan (1979); Rogers (1995).
6	Timescales are relatively short, and the diffusion history is not important	Rogers (1995).

Source: Adopted from Lyytinen and Damsgaard, 2001, p. 178

Lyytinen and Damsgaard (2001) proposed four remedies to enable the theory to explain the process and factors of diffusing EDI. According to these authors, the first one was that complexity, networking, intensive learning, and context are also features of the innovation. However, someone may wonder whether Rogers and Shoemaker (1971) have not already covered complexity as one of the features of the innovation. The second one was that institutional regimes and process features, which are historical context and players in the diffusion arena influence the adoption of the innovation. The third one was that the theory should be multi-layered and use multiple perspectives from other disciplines like political science. The last one was that apart from S-curve, different time-scales during diffusion process can improve the explanation.

Based on other diffusion research, Rogers (2003) noted four issues about some assumptions of the theory and proposed ways to improve it. The first theory proposition which was flawed was that innovations are appropriate regardless of the attitude of would-be adopters towards such innovations. The improvement is that adopters modify some innovations which can be modified before adopting them. Additionally, innovations can also be either bundled or adopted in sequence, but it might be challenging to identify their demarcations. The second one was that only individual features are responsible for the adoption or rejection of the innovation, but the research revealed that even the social system influences the decision. The third proposition was that the adoption of innovations improves the socio-economic conditions of the society, but it improves only the conditions of adopters.

The last theoretical assumption that a survey method was the only appropriate way to research the diffusion of innovation was flawed because it has shortcomings, particularly the recall issue. Rogers (2003) suggests that other research methods such as field experiment, observation and ethnography should be used to study the diffusion of innovation to improve the explanation. For instance, according to Rogers' suggestion, in addition to the survey, Zimmerman et al. (2015) employed semi-structured interviews, document review and programme evaluation.

Rogers (2003) addressed most criticisms and argues that the theory is valid as to a great extent, the growing research evidence across the globe supports it. Dibra (2015) also argues that this theory is more appropriate in studying the adoption of sustainable tourism practices than cost-benefit and stakeholders theories because it is well-established and captures a social change. Moreover, despite its validity, Rogers (2003) encourages diffusion researchers to improve the explanation of the process and factors of diffusion of innovation.

The discussion of the selected theory indicates a theoretical basis of the analysis of factors which influence the provision and utilisation of e-participation opportunities and considerations of online views of people. It is also the basis for the explanation of factors which influence policy-related debates on social media pages and interactive websites of media outlets.

2.8 CONCEPTUALISATION AND CONCEPTUAL DEFINITION OF E-PARTICIPATION

Conceptualisation is critical to measure correctly abstract concepts because, in social science, concepts can be defined differently by different scholars (Neuman, 2014). For example, Holzer and Manoharan (2016); UN (2018a); Whyte, Macintosh, and Shell (2006) define e-participation differently as indicated below. However, their definitions have some common elements such as informing and involving the public in decision-making processes through the Internet.

According to Whyte et al. (2006, pp. 6-7,12, 88), e-participation is the managed interaction between councils and the public, which takes place online to facilitate informed decisions about public affairs. As Table 2.9 and Box 2.1 illustrate, the characteristics of that interaction are a flow of information from councils to people and engagement of many people using online tools like polls.

Table 2.9. E-community Council Tools and Activities

Community councillor/ admin tool	Public response and dialogue
<ul style="list-style-type: none"> - Publish item on a topic of current interest, - Make 'private' comments to other councillors, e.g. on draft minutes, - Publish a document for comment, e.g. minutes, consultations, - Draft a response to a published consultation, 	<ul style="list-style-type: none"> - Read news items about the issues and projects the Community Council is working on, - Download attached documents, - Comment on any item shown, - Respond to consultations from the local Council and other bodies, - Write item for the home page, and submit it for approval,

Community councillor/ admin tool	Public response and dialogue
<ul style="list-style-type: none"> - Check/ approve item or comment added by the public, - Use the topic to categorise items, - Set up a questionnaire, - Edit the events & meetings diary, and contact information. 	<ul style="list-style-type: none"> - Answer questionnaires and polls, - Find dates of forthcoming minutes and events, - Find contact details for local organisations.

Source: Adopted from Whyte et al., 2006, p. 8

Box 2.1 An Outline of Online Community Council- Community Engagement

Community council

- Facilitate consultations, planning applications,
- Survey opinion on community issues,
- Publicise/ inform events

Community

- Participate in events,
- Respond to consultations, planning applications,
- Raise community issues

Source: Adapted from Whyte et al., 2006, p. 39

Holzer and Manoharan (2016, pp. 15, 19) define e-participation as the interaction between the government and citizens and the engagement of citizens in decision-making processes via the Internet. The critical elements in this practice are policy deliberations and provision of the latest information on the council governance. Holzer and Manoharan consider e-participation as one of the five elements of digital governance. Other aspects of digital governance are privacy or security, usability, content and service. Additionally, they defined the digital governance as the delivery of public service and participation of citizens in governance using the Internet. Their categorisation of digital governance separates content from e-participation, but the categorisation does not remove the link between them.

As Tables 2.10 and 2.11 indicate, Holzer and Manoharan (2016) created features to measure content and citizen and social engagement. For example, indicators of content are publications like documents, reports and books while aspects of citizen and social engagement are like online polls.

Table 2.10. Content Features

No.	Feature
1	Access to more than one language
2	Budget information
3	City charter and policy priority
4	City code and regulations
5	Contacts
6	Disability access
7	Downloadable documents
8	Emergency management/ alert mechanisms
9	Event calendar
10	External links
11	Geographic Information System (GIS) capabilities
12	Human resources information
13	Minutes
14	Mission statements
15	Office location
16	Publications (documents, reports, books)
17	Wireless technology

Source: Extracted and adapted from Holzer and Manoharan, 2016, p. 83

Table 2.11. Measures of Citizen and Social Engagement

No.	Measure
1	Citizen satisfaction survey
2	Comments/ feedback
3	Newsletter
4	Online bulletin board/ chat capabilities
5	Online decision-making
6	Online discussion forum on policy issues
7	Online surveys/ polls
8	Performance standards, measures or benchmark
9	Scheduled e-meetings for discussion
10	Synchronous video

Source: Extracted and adapted from Holzer and Manoharan, 2016, p. 84

UN (2016) also defines e-participation as the practice whereby the government informs, interacts and involves stakeholders like citizens in decision-making processes to reach informed policy decisions. As Table 2.12 depicts, UN breaks down e-participation into e-information, e-consultation and e-decision-making.

Table 2.12. Definitions of Three Dimensions of E-participation

Aspects of e-participation	Definition
e-information	Provision of Governments provide enabling participation by information on people with information via providing citizens with the Internet ICT channels for them to public information and make informed choices for access to information the next stage of e-participation - consultation without or upon demand
e-consultation	Organising Government consults people engaging citizens in public consultations on a particular policy, service contribution to and online consultations or project without an deliberation on public obligation to use such policies and services contributions

Aspects of e-participation	Definition
e-decision-making	Involving citizens directly in decision processes A process in which people provide their inputs into decision-making processes empowering citizens through collaborative design of policy options and joint production of service components and delivery modalities

Source: UN, 2016, pp. 54, 141

Also, UN (2016, 2018b) created variables to measure e-participation, but they did not include some of them in the Table because of the use of terms such as et cetera (see Table 2.13).

Table 2.13. Features Used to Measure E-participation

No.	Feature
1	Sources of archived information such as policies, budget and legislation Use of (i) digital channels (including mobile devices/ platforms), (ii) open data technologies in the sectors of education, health, finance, social welfare, labour and environment
2	Online information on citizen's right to access government information (such as Freedom of Information Act or Access to Information Act)
3	Evidence of Government partnership/ collaboration with third parties (civil society, private sector) to provide services
4	Evidence about free access to online government services through the main portal, kiosks, community centres, post offices, libraries, public spaces or free Wi-Fi
5	Open datasets (in machine-readable non-proprietary formats), related policies/ guidance
6	Evidence of collaboration in co-production, crowdfunding
7	Evidence on engaging citizens in consultations/ communication to improve online/ mobile services and raise citizens' satisfaction with them
8	Evidence of engaging citizens in consultation/ communication on education, health, finance, social welfare, labour, environment
9	"personal data protection" legislation online

No.	Feature
10	Evidence on opportunities for the public to propose new open datasets to be available online
11	e-participation policies/ mission statements
12	Public procurement notifications and tender results online
13	Online tools (on the national portal) to seek public opinion and other input in raw (non-deliberative) form policy formation
14	Evidence on the decision made that included the results of consultation with citizens online in the sectors of education, finance, health, social welfare, labour and environment
15	Evidence on government publishing the outcomes of policy consultations online

Source: Adapted from UN, 2016, p. 54, 2018b, p. 113

Kneuer and Harnisch (2016) adopt the definition of OECD (2001) as cited in Kneuer and Harnisch (p. 548) which reads 'a relationship based on partnership with government in which citizens actively engage in defining process and content of policymaking'.

Astrom et al. (2012) describe e-participation as an online continuous top-down, bottom-up relationship between the government and citizens.

Following the conceptualisation of e-participation in those e-participation studies, the definitions of the main concepts and research questions 1, 2, 3 and 4 draw the boundaries of this study (Blaxter et al., 2010; Bryman, 2012; Neuman, 2014; Pickard, 2013; Sumerson, 2014). They also link the abstract concepts to measurements of this study (Bryman, 2012; Neuman, 2014). The main concepts are adoption, e-participation, government information, online government engaging features, online interactions, activeness of online interactions and the Internet.

In this research, adoption is the regular practice of e-participation, which follows the decision to adopt the innovation (Rogers, 2003). At the national level, the decision is in the Constitution of Tanzania of 1977 amended in 2005; the National

Information and Communication Technology, 2016; and the Access to Information Act, 2016.

I define e-participation as a continuous two-way process which has three components, which are as follows. First, a central government makes government information available on government ministries' websites and social media pages, and in return, citizens access that information. Second, the central government consults with citizens on policy issues via the Internet, and the citizens provide their views on such matters through the same medium. Last, the central government pays attention to online views received from citizens, makes policy decisions, and gives feedback on decisions and their views via government websites and social media pages.

Online government engaging features to refer to social media (Facebook pages, Twitter accounts, YouTube channels, and Blogs), e-poll, online survey, e-petition, e-referendum, and an online forum (Bonson et al., 2012; Holzer & Manoharan, 2016; UN, 2016, 2018c),

Government information means policy; legislation (Acts, regulations); plan, strategy, programme, project; budget speech/ book; report; and statistics (Ally, 2007; UN, 2016, 2018c; United Republic of Tanzania, 2014c),

Online interaction means occurrences of activities such as posting and commenting that government ministries, national traditional media institutions, and citizens perform on interactive websites and social media pages of government ministries and traditional national media outlets.

The activeness of online interaction means a duration of time in terms of minutes between posts, comments, and replies within an hour. A scale of activeness was in percentiles, which were further set into quartiles that divide data into four equal portions (Field, 2013). These quartiles are 25%, 50%, and 75% (Field, 2013), which led to four portions that were labelled in an ordinal scale of 'not active',

'active', 'more active', and 'most active'. The percentiles read in reverse order to identify the two extremes of the activeness, that is, the fewer the minutes, the higher the activeness. Additionally, for a number of activities on social media pages relative to one another and periods, the same scales were used but not reversed.

The Internet means a website and social media.

Based on these conceptual definitions, research question 1, 2, 3, and 4 which are stated in chapter one were formulated.

2.9 SUMMARY

Different approaches to locate relevant information material for this research facilitated access to relevant literature. The history of democracy threw light on the meaning of democracy in the context of this research, although there is a debate on the meaning of the concept. The main feature of democracy is a consensus decision by as many informed people with different backgrounds as possible. The British colonial government introduced democracy to Tanzania, and after independence, the government has engaged people, but the use of the Internet to collect the views of citizens was limited.

The critical part of the literature review was the debate about the factors influencing the adoption of e-participation across the UN member states and measurement of adoption of e-participation. From the debate, I identified the gap of this research. The gap is that the understanding of factors that influence e-participation adoption in Tanzania is incomplete because a proxy is not always reliable. Likewise, the review of the research methods of previous e-participation studies and their findings informed the selection of research methods for this research.

Theoretical framework illuminates the analysis of this research while the conceptual framework enables the measurement of the adoption of e-

participation in Tanzania. Moreover, research questions 1, 2, 3 and 4 which have a linkage with both frameworks, also draw the boundaries of this research and their answers solve the identified research problem.

3 METHODOLOGY

This chapter presents the scientific method which was followed to fulfil the purpose of this study (Marczyk, DeMatteo, & Festinger, 2005). The scientific method is a set of approaches, processes and procedures that are guided with the principles of research design. For further information about research design, see section 3.1. In this chapter, three areas of the methodology, which are population, methods and ethics, are covered. The first area covers sampling strategies, sampling techniques, and samples. There were six types of populations, and sampling strategies were probability and non-probability sampling. Simple, stratified, cluster, purposive, and convenience techniques were employed to draw those samples from their populations. The second area comprises research design, methodological approaches, selected research methods, data collection and analysis, and the instruments.

The last area covers legal and ethical issues because the study also dealt with people, including the researcher. Research ethics aims to ensure that a researcher adheres to legal and human rights throughout the process of conducting the study (Aberystwyth University, 2014b; Bryman, 2012; Neuman, 2014). This section also involves integrity issues.

3.1 RESEARCH DESIGN

Methodologies of this research conform to the principles of research design. These principles inform and guide scientific inquiry in order to generate legitimate knowledge as they draw the boundaries of scientific research (Guba, 1990; Guba & Lincoln, 1994). The principles are underpinned by research paradigms which respond to three philosophical questions about knowledge (Guba, 1990; Guba & Lincoln, 1994). These questions are ontologically, epistemologically and methodologically orientated (Guba, 1990; Guba & Lincoln, 1994).

A research paradigm is a set of core beliefs which guide and inform the research inquiry (Guba, 1990; Guba & Lincoln, 1994). The paradigm answers the questions about the nature and form of reality, nature of the relationship between the inquirer and the inquired, and the way the inquiry is conducted (Guba, 1990; Guba & Lincoln, 1994). According to Guba (1990) and Guba and Lincoln (1994), there are four dominant research paradigms, as indicated in Table 3.1. None of these paradigms is superior as there are no standard criteria to measure superiority (Guba, 1990; Guba & Lincoln, 1994), but they attempt to offer different solutions to different theoretical and pragmatic issues (Guba, 1990; Guba & Lincoln, 1994).

Table 3.1. Central Underlying Assumptions of Main Research Paradigms

Philosophy and purpose	Research paradigms							
	Positivism		Post-positivism		Critical theory and related ones		Constructivism	
Ontology	Realism		Critical realism		Historical realism		Relativism	
Epistemology	Dual	and	Modified dual		Non-dual	and	Non-dual	and
	objective		and objective		subjective		subjective	
Methodology	Experimental		Experimental		Dialogic		Dialectical	
	and		and		dialectical		conventional	
	manipulative		manipulative -				hermeneutical	
			modified					
Main purpose	Explanation -		Explanation -		Transformation,		Reconstruction,	
	prediction and		prediction and		Emancipation,		Understanding	
	control		control		critique			

Source: Adapted from Table 6.1 and 6.2 by Guba and Lincoln, 1994, pp. 109, 112

The four broad research paradigms, which are positivism, post-positivism, critical theory and constructivism, are arranged on the continuum from the oldest at one end to the youngest at the other (Guba, 1990; Guba & Lincoln, 1994). The doubts concerning methods and metaphysical premises of positivism have led to the

emerging of other paradigms which also still question each other about their methods and basic premises (Guba, 1990; Guba & Lincoln, 1994).

The doubts about positivism originated internally and externally (Guba, 1990; Guba & Lincoln, 1994). The internal issues are related to the closed system, exclusion of meanings and purpose of human behaviour, ambiguity in generalisation, relevance of theories to participants, and a tunnel-like discovery process (Guba, 1990; Guba & Lincoln, 1994). Additionally, reality cannot be fully comprehended as human beings are fallible, and research tools are not sophisticated enough to discover it correctly (Guba, 1990; Guba & Lincoln, 1994). Qualitative methods, triangulation, critical tradition, and critical community are employed to resolve those issues (Guba, 1990; Guba & Lincoln, 1994).

The external issues relate to underlying assumptions of independence, objectivity, time, context, and position of the reality, that is, internal against external (Guba, 1990; Guba & Lincoln, 1994). Guba (1990) and Guba and Lincoln (1994) argue that as the inquiry is about human beings, those assumptions are not relevant. For example, theories hold values and facts and the inquirer is biased. However, a theory can determine facts through deduction. Collected facts through induction can refute a single theory rather than verifying it (Guba, 1990; Guba & Lincoln, 1994).

Following these different guiding principles, this study was widely influenced by the position of post-positivism as it seeks to explain the factors of e-participation adoption in Tanzania. For example, I did not use hypotheses as suggested by Guba (1990) and Guba and Lincoln (1994) to allow discovery in the course of conducting the study. Furthermore, some previous studies of online public participation also influenced the design of this study.

3.2 METHODOLOGICAL APPROACHES

This study employed both quantitative and qualitative approaches concurrently, as Table 3.2 indicates. The argument that mixed methods approach generate knowledge more comprehensively by combining their strengths while offsetting their limitations (Creswell, 2014) informed the selection of the mixed-methods approach for this research.

Table 3.2. The Snapshot of Study Populations, Samples and Research Methods

Data source	Data source label	Sampling approach	Response rate/ sample size	Research method
Government ministries	A	Simple random selection	8	Quantitative content analysis
Government ministries with social media pages	B	Simple random selection	4	Quantitative content analysis Qualitative content analysis
Traditional national media outlets	C	Purposive (non-random) selection	4	Quantitative content analysis Qualitative content analysis
Tanzanian citizens – virtual public spaces visitors	D	Convenience (non-random) selection	143,669	Quantitative content analysis
Tanzanian citizens – academics and researchers	E	Cluster random selection	51	Online self-administered survey questionnaire
Government officials-policy and planning departments	F	Purposive (non-random) selection	8	Face-to-face semi-structured interview

3.2.1 Quantitative methodology

This approach was selected to manipulate variables (Denzin & Lincoln, 2005; Guba, 1990; Guba & Lincoln, 1994; Patton, 2002) to reveal magnitude and

patterns which are associated with e-participation adoption in Tanzania. It was also used to identify the magnitude of interaction on social media pages of traditional national mass media.

3.2.2 Qualitative approach

This methodology was chosen because it facilitates subjective interaction between the researcher and participants to identify their perspectives on e-participation adoption in Tanzania (Bryman, 2012; Denzin & Lincoln, 2005; Miles & Huberman, 1994; Patton, 2002). It also helped to understand the motives of the government to publish public information online, adopt engaging online tools and relate them to patterns and magnitude of adoption of e-participation.

3.3 POPULATION, SAMPLING, AND SAMPLE SIZE OF DATA SOURCES

Data were collected from government officials, government ministries websites, online government ministries engaging features, citizens, and social media pages of traditional national mass media (see Table 3.2). Of course, government officials were also citizens, but in this context, they were not labelled as citizens because they represented the state, which is a crucial player in e-participation.

Both probability and non-probability sampling strategies were used to obtain samples for this study because it employed a mixed-methods approach. The significant difference between these strategies lies in generalising findings to the population from which the sample originates, and the design of research significantly influences that distinction (Bryman, 2012; Fricker, 2008; Neuman, 2014). The ultimate aim of probability sampling strategy is to generalise findings to the population from which a sample was drawn (Bryman, 2012; Fricker, 2008; Neuman, 2014). In contrast, the main goal of a non-probability sampling strategy is not to generalise findings to the population from which the sample originates (Bryman, 2012; Fricker, 2008; Neuman, 2014).

In probability sampling strategy, the selection process excludes a human influence through randomisation procedure which gives an equal chance to all members of the population to participate in the study (Bryman, 2012; Fricker, 2008; Neuman, 2014). This probabilistic mechanism reduces the bias of the sample; that is, it increases the level of sample representativeness (Bryman, 2012; Fricker, 2008; Neuman, 2014). Bias means that the value of statistics in the sample does not match the value of parameters in the population (Field, 2013; Fricker, 2008). Non-probability sampling strategy gives a researcher a mandate to select cases, depending on his/ her judgement and convenience (Bryman, 2012; Creswell, 2014; Fricker, 2008; Neuman, 2014).

These sampling strategies have different sets of techniques. The techniques that fall under probability sampling strategy are simple random sampling, systematic random sampling, stratified random sampling, cluster random sampling, and random digit dialling (RDD) (Bryman, 2012; Neuman, 2014). Main techniques of non-probability sampling strategy are purposive, convenience, snowball, and quota sampling (Bryman, 2012; Neuman, 2014). However, it appears that some scholars categorise non-random samples differently by either collapsing or expanding them (Bryman, 2012; Creswell, 2014; Fricker, 2008; Neuman, 2014).

3.3.1 Tanzanian citizens

Citizens were divided into two groups. The first one included visitors of the selected virtual public spaces who performed some activities during the period of observation, while the second one included academics and researchers. However, it was possible that some academics and researchers also visited selected virtual public spaces, but they were not identified in those online public areas.

3.3.1.1 Visitors to interactive online public spaces

In this context, interactive virtual public spaces are interactive websites and social media pages of government ministries and traditional national mass media on which various people can visit and interact.

The population size of citizens who lived in Dar es Salaam and performed some activities on online public spaces was not known. The reason is that a register of the Tanzanian Internet users who lived in Dar es Salaam was hard to construct because of privacy and data protection issues (Bryman, 2012; Fricker, 2008; Neuman, 2014). Since it was hard to establish the sampling frame of these citizens, convenience and purposive sampling techniques were employed.

Convenience sampling method allows the researcher to select participants depending on the convenient place and time, availability of intended participants and easiness to reach them (Bryman, 2012; Neuman, 2014). In the context of this research, convenient places were interactive websites and social media pages of traditional national mass media and government ministries. In relation to purposive sampling, the investigator sets criteria and uses different methods to construct the sample (Bryman, 2012; Neuman, 2014). The selection of visitors to interactive virtual public spaces is based on selected online public places and not only visiting those spaces but also participating.

Kiswahili language, the tone of language, a sense of citizenship, keen interest and familiarity with Tanzanian socio-economic, political and cultural landscape were also used to some extent to authenticate Tanzanian citizenship. For example, one participant was screened out because of not using the Kiswahili language. According to Google Translate, that person used Russian (нихера не понял! (Independent Television (ITV) Tanzania, 2016)). This authentication was only made based on comments and replies from participants. However, some non-Tanzanians also speak Kiswahili language, and likewise, some Tanzanians can speak other languages, such as Russian. As the content of postings was out of

the scope of this study, there was no further discussion about the meaning of that reply in Russian.

Regarding ownership of interactive virtual public spaces, there were government and mass media owned interactive websites and social media pages. In this context, owning a social media page means a subscription. Purposive sampling technique was further used to select traditional national mass media while those of government ministries were done using simple random sampling.

The sample size of Tanzanians who visited online public spaces was 143,669. These participants were named 'group D' to distinguish them from survey and interview participants in the summary of this chapter, analysis, discussion and conclusions.

There were limitations regarding identifying visitors who performed some activities, for example, on the YouTube channels of the selected institutions. These activities were video viewing, liking and disliking. It is possible that if people who performed those activities were recognised, the sample size would be more significant than this one although one person can perform different activities. However, non-Tanzanians could be watching those videos and identifying them could be difficult.

3.3.1.2 Academics and researchers

The sample was drawn from the population of academics and researchers using three types of random sampling techniques, which are simple, stratified and cluster random sampling.

The population of academics and researchers had three main features which were full-time employment, living in Dar es Salaam during the period of fieldwork of this study, and internet literacy. This population was selected because according to the nature of their work and missions of their employers, they were conducting

research that had implications for national policies (Policy and Operations Evaluation Department, 2007; Weaver & McGann, 2006).

Full-time employment was required because it shows that in no small degree, they were conducting research. Internet literacy was one of the selection criteria because this study was about public participation through the Internet (Jensen, 2013). I chose Dar es Salaam because it is a commercial city where there is high adoption of the Internet (TCRA, 2010; United Republic of Tanzania, 2003, 2014a).

The size of the entire population of these participants was not established because of the limited time of fieldwork, even though the size of the population of their institutions was thirteen. Moreover, the register of academics was not available on the Tanzania Commission for Universities (TCU) website.

Concerning sampling and sample size, three random sampling techniques, which are simple random sampling, stratified sampling and cluster random sampling, were used to achieve a sample of academics and researchers. Simple random sampling is the selection of participants from the population, and it is stronger than other techniques, but it does not capture the complexities of the real world (Bryman, 2012; Neuman, 2014). Stratified random sampling is the random selection of participants after dividing them into groups based on their qualities, for example, gender (Bryman, 2012; Fricker, 2008; Neuman, 2014). Moreover, this technique can either be proportional or not proportional to the sizes of groups (Bryman, 2012; Neuman, 2014).

Cluster random sampling technique is the selection of participants through different stages before reaching the final sample (Bryman, 2012; Fricker, 2008; Neuman, 2014). This technique was designed to overcome the problem of the spread of elements of the population geographically, and in different social systems such as institutions, however, the probability is reduced (Bryman, 2012; Neuman, 2014). The problem of a scatter of elements of the population has

implications for cost and time during the construction of a sampling frame (Bryman, 2012; Neuman, 2014).

The first stages of a cluster sampling technique are either proportional or non-proportional (Neuman, 2014). The proportional cluster random sampling (Proportional Probability to Size (PPS)) considers the size of each group in the sampling frame (Bryman, 2012; Neuman, 2014). In the non-proportional cluster random sampling technique, clusters are given equal probability regardless of their sizes (Neuman, 2014).

Non-proportional cluster random sampling technique was selected because registers of participants of all clusters were not obtained, and it was less costly and less time-consuming (Neuman, 2014). Following the lesson of selecting institutions before establishing the entire population size, to set the register of all participants could be more costly and time-consuming as argued in the literature (Bryman, 2012; Fricker, 2008; Lemeshow & Hade, 2008; Neuman, 2014).

The sampling frames were established based on clusters which were institutions, and samples of participants were drawn from those frames (Bryman, 2012; Fricker, 2008; Jakob, Arens, & Zerback, 2005; Neuman, 2014). During the first stage, the procedures were as follows: firstly, nine universities and four university colleges, which are in Dar es Salaam, were included in this study. Their sampling frames were constructed based on a list of recognised universities that was published on 25 November 2015 on Tanzania Commission for Universities (TCU) website (Tanzania Commission for Universities, 2015).

Secondly, samples of four universities and two university colleges were disproportionally selected using simple random sampling technique from their sampling frames (Bryman, 2012; Neuman, 2014). The confidence level for both samples was set at 95% while the confidence intervals were 49% for a sample of universities and 57% for a sample of academic colleges. One university and one university college did not show any cooperation.

The population size of research institutions located in Dar es Salaam was not known because there was no single register of these organisations. Their selection was as follows: firstly, the sampling frame of thirteen research organisations was created based on lists of research and development institutions. The names of these establishments were obtained from the Tanzania Commission for Science and Technology (COSTECH) website (COSTECH, 2016) and 2015 Global Go To Think Tank Report (McGann, 2016).

Secondly, all thirteen research institutions were included in the sample because a margin of error and a confidence level were set at 5% and 95%, respectively (Creative Research Systems, 2012). Of these thirteen institutions, only six cooperated; and one research organisation was not located virtually and physically.

During the second stage, which was the final one, sampling frames of participants were constructed and merged. The final sample for the survey was then drawn from that sampling frame using proportionally stratified sampling technique. This technique allowed the consideration of gender and roles of participants in their organisations and maintained their proportions (Bryman, 2012; Larsen, 2008; Neuman, 2014).

The following procedures were employed: firstly, the desired sample of 171 participants was determined using the margin of error and confidence level (Creative Research Systems, 2012). The confidence interval was set at 5%, while the confidence level was 95%. Additionally, 20% of the desired sample was increased to offset non-responses in advance (Bryman, 2012; Kent, 2001).

Secondly, in the sampling frame, researchers and academics were listed according to their clusters to give them the equal probability of being included in the sample depending on sizes of their clusters (Bryman, 2012; Neuman, 2014).

Thirdly, thirty more participants were chosen to replace those who did not take part when the survey was closed using a similar approach of selecting participants as recommended by Brick (2008). The substitution was done to reach a suggested minimum number of 60 cases to conduct univariate analysis or above forty responses to continue with quantitative analysis (Kent, 2001, p. 203).

Lastly, the final sample constituted 205 researchers and academics and was labelled 'group E' to identify them in the summary of this chapter and conclusions.

There were some limitations of the constructed samples. Samples of academics were not representative because, during the first stage, clusters were not selected proportionally (Neuman, 2014), and their sizes were not established due to limited time. In a similar vein, samples of researchers were not representative as a list of their clusters and sizes were not known due to lack of their register (Neuman, 2014). For example, other research institutions like HakiArdhi and Innovation Policy Research Organisation were not on COSTECH website and in 2015 Global Go To Think Tank Report.

During the final stage, samples of each group were randomly drawn proportionally to their sizes contrary to the non-proportional cluster random sampling technique (Bryman, 2012). The assumption is that the number of participants from each group should be the same (Bryman, 2012). I violated the assumption because some clusters had fewer elements than a determined sample size for each group, which was about 20 participants.

3.3.2 Traditional national mass media

The population of media outlets comprised TV, radio, and print newspapers which were licensed or registered in Tanzania. There were 123 licensed radio stations and 26 licensed TV stations (TCRA, 2014a) while registered periodicals that included newspapers were 868 (E. Mangi, personal communication, November 23, 2015), but the list had a total of 838 periodicals (Jamhuri ya

Muungano wa Tanzania, 2015). Purposive sampling approach was employed to obtain a sample of four traditional national mass media, which were ITV Tanzania, Mwananchi Tanzania, StarTV, and Tanzania Broadcasting Corporation channel one (TBC1).

I named the group of selected media 'C' to differentiate it from other data sources in the summary of this chapter, analysis, discussion, and conclusions. They are further labelled individually in a subscript form as follows: ITV Tanzania is C_1 , Mwananchi Tanzania is C_2 , Star TV is C_3 and TBC1 is C_4 .

Selection criteria were as follows: Firstly, Kiswahili language was considered because it is one of the two official languages. It is also a national language, and in Tanzania, it is spoken more widely than English (United Republic of Tanzania, 2003, 2014a). Secondly, national coverage was also included in selecting these data sources because most news is related to policy issues which are nationwide. Information on geographical coverage for electronic mass media was obtained from TCRA website (TCRA, 2014a), and for newspapers, it was acquired from two studies of mass media in Tanzania (Juppi, Berege, & Yusuph, 2014; Tanzania Media Fund, 2012).

Furthermore, the size of the audience was 50% or higher. This cut-off point was set to capture a reasonably large proportion of citizens who interacted online based on the size of the physical audience. Proportions of the mass media audience were obtained from a study of mass media perception in Tanzania (Tanzania Media Fund, 2012). Additionally, the presence of traditional national mass media on at least one of the most popular social media was one of the criteria. The most popular social media in terms of a number of users worldwide were Facebook, Twitter, and YouTube (Castells, 2009; Ellison & Hardey, 2014; MarketLine, 2014). Finally, the active, interactive website was one of the criteria because it was intended to get data on the adoption of online interaction.

The other two procedures were: firstly, for print media, the frequency of publication, which was a daily publication, was included in choosing newspapers to capture debates based on the topical information. Information on the frequency of newspapers was obtained from a list of registered periodicals in Tanzania (Jamhuri ya Muungano wa Tanzania, 2015). Secondly, the status of news in the papers was also one of the factors of including newspapers in the sample. Only newspapers that published hard news were considered for selection. One of the studies of print media in Tanzania was used to verify the news status of the selected newspaper (Juppi et al., 2014). Hard news was chosen because it is argued that readers of that kind of news are likely to take part in political debates (Shah, Kwak, & Holbert, 2001, as cited in Hoffman, Jones, & Young, 2013).

A minimum score for the national mass media to qualify for a sample of traditional mass media was 80% (see Table 3.3). Scores were obtained from two indices that were on the scale of zero to a hundred per cent. The index of traditional national electronic media had five indicators while the index of traditional national print media had seven aspects, as Table 3.3 shows.

Table 3.3 Considered and Selected Traditional National Mass Media

Medium	Language (Kiswahili)	Coverage (national)	Size of the audience (>/=50%)	Active, interactive website	Social media pages	Daily publication	News status - hard	Score (%)
Radio								
TBC Taifa	Yes	Yes	Yes	No	No			60
Radio Free Africa (RFA)	Yes	Yes	Yes	No	No			60
TV station								
TBC1	Yes	Yes	Yes	No	Yes			80
ITV Tanzania	Yes	Yes	Yes	No	Yes			80
StarTV	Yes	Yes	Yes	No	Yes			80
Newspaper								
Mwananchi Tanzania	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100

Note. Blank means Not Applicable

3.3.3 Government ministries

I chose the ministries of the central government because of three factors. The first one is that the central government is responsible for making policy orientated decisions (United Republic of Tanzania, 2005). The second one is that the diffusion of new media was higher in the central government than the local government (Holzer & Kim, 2006, 2008; Jamhuri ya Muungano wa Tanzania, 2013e). The last one is that previous studies of information access included the central government in their populations (Ally, 2007; Chachage et al., 2005) and online public participation (UN, 2003, 2004, 2005, 2008, 2010, 2012, 2014, 2016, 2018c).

The total population of central government ministries was 18. Eight government ministries were selected from a sampling frame of those 18 government ministries (Mwananchi Communication Limited, 2015b, 2015a) using a simple random sampling technique (Bryman, 2012; Lemeshow & Hade, 2008; Neuman, 2014).

There were two issues of time and size of the margin of error, that is, with that size of the population, the bigger the sample, the smaller the confidence interval, the more extended period of fieldwork (Creative Research Systems, 2012; Neuman, 2014; Reichmann, 1961). Due to this dilemma regarding the accuracy of statistics and limited time, the confidence interval was set higher than 0.5 in order to study the sample rather than conducting a census (Reichmann, 1961).

I named the chosen government ministries 'group A' to separate them from other cases in the summary of this chapter, analysis, discussion of findings, and conclusions. Moreover, according to their sectors, in alphabetical order, group A cases were assigned Arabic numbers in a subscript form. Their sectors are a constitution, education, home affairs, industry, information, land, public works, and water.

3.3.4 Government ministries with social media pages

All government ministries which subscribed to at least one social media, which were Facebook, Twitter and YouTube, were included in this population. These social media were the criterion to construct a sampling frame because they were more prevalent (Bonson et al., 2012; Castells, 2009; Holzer & Manoharan, 2016; MarketLine, 2014) and were included in some previous studies of e-participation (Bonson et al., 2012; Ellison & Hardey, 2014; UN, 2018, 2008, 2010, 2012, 2014, 2016).

During the construction of the sampling frame, the ministry's social media subscriptions were verified. All icons of social media on their websites were opened to identify an official name or state logo, a platform home page, precise

contact details, including a website address. This approach was adopted from the study of e-participation in the English Local Authorities by Ellison and Hardey (2014).

The size of the population of these government ministries was eight. A final sample size of four central government ministries was drawn from the constructed sampling frame using simple random sampling technique (Bryman, 2012; Lemeshow & Hade, 2008; Neuman, 2014).

The margin of error was set higher than 0.5 to manage the research within a specified schedule (Creative Research Systems, 2012; Reichmann, 1961). If it were set at 0.5, the research would take much more time as the sample would be bigger than the selected one.

The selected government ministries are labelled as 'group B' to identify them in the summary of this chapter, analysis, discussion, and conclusions. Individual cases were given Arabic numbers in a subscript format to show their particularities.

3.3.5 Government officials

Civil servants were involved in this study because it is about policy-related decision-making processes, and they represented the government. The size of the population of civil servants was not established due to time limit and cost. Moreover, the findings based on the interview data were not meant for generalisation to their entire population (Bryman, 2012; Neuman, 2014).

Purposive sampling technique was used to select them based on any of the parameters which were set by the researcher as shown below, but the first two criteria were obligatory. It was also planned to interview one public official per one government ministry. The six criteria for selecting them were as follows: one, the public servant who works in the department of policy and planning of the central government ministry. Two, the government official is responsible for

policy and planning decision-making process. Three, the official works in the government ministry which reviewed or formulated a policy recently. Four, the official works in the government ministry which subscribed to either Facebook, Twitter, or YouTube. Five, the official works in the government ministry which oversaw core public sector. Six, the official works in the government ministry whose permanent secretary was related to a researcher, particularly during the initial process of constructing the sample.

The final sample had eight government officials. Regarding gender, five officials were men, while three were women. In addition to participants' disguised names, their group was labelled 'F' to identify them in this chapter and conclusions (see Table 3.2). Individual participants were also labelled using Arabic number to identify their quotations, and the numbering was according to the dates of their interviews.

3.4 SELECTED RESEARCH METHODS

There are a range of research methods that are related to quantitative and qualitative methodologies (Bryman, 2012; Neuman, 2014; Pickard, 2013). The research methods are tools for generating knowledge (Clarke, 2005, as cited in Sandelowski & Barroso, 2007). However, Bryman (2012) considers methods as tools for generating data. Different authors categorise research methods differently (Pickard, 2013), but it appears that there are a survey, observation, case study, focus group, document or text analysis, and grounded theory (Bryman, 2012; Creswell, 2014; Neuman, 2014).

As Table 3.2 shows, three research methods, which are content analysis, survey, and interview, were chosen to generate data for this study. The selection of these three research approaches was intended to generate data about a top-down, bottom-up relationship between the government and citizens concurrently because they have different strengths and weaknesses (Bryman, 2012; Punch, 1998, as cited in Silverman, 2013).

As the online interaction was not observed in the real-time, content analysis was selected to generate frequencies of interaction on online spaces of government ministries and traditional national mass media. The argument that real-time online interaction is very close to observation, while the non-real-time online interaction is an archived document (Bryman, 2012), influenced the selection of content analysis. Moreover, according to Bryman (2012) and Neuman (2014), websites and web pages are virtual documents. It was also selected to produce data on the presence of government ministries on social media and the availability of information on the websites of government ministries.

This research method enabled the collection of data from a large volume of text (Neuman, 2014) like Facebook pages of government ministries and national media institutions. Moreover, it also helped to gather data about government information, which was distant and scattered (Neuman, 2014). Furthermore, the collected data were more accurate because the government ministries, national media institutions and social media users were not aware that their activities would be materials for this research (Neuman, 2014). However, it did not provide reasons behind what was observed (Bryman, 2012; Neuman, 2014).

The survey was chosen to provide patterns and magnitudes of e-participation (Bryman, 2012; Creswell, 2014; Pickard, 2013; Sandelowski & Barroso, 2007), but it was less accurate due to reasons including social desirability and recollection of participants (Bryman, 2012; Creswell, 2003; Neuman, 2014) because of logical errors.

The interview was selected to give an opportunity of obtaining richer data on e-participation adoption (Bryman, 2012). Moreover, it was chosen to understand views of participants on the adoption of e-participation (Bryman, 2012; Creswell, 2014; Silverman, 2013); and to get historical information (Creswell, 2014).

As in the survey, this approach generated less accurate data because of social desirability and recall capacity of government officials (Bryman, 2012; Creswell,

2014; Neuman, 2014; Sandelowski & Barroso, 2007) because the comparison indicated some variations in their responses. Additionally, for instance, one participant referred the researcher to a Chief Information Officer (CIF), but the CIF was not in the office on that day. Furthermore, the study was not designed to involve CIFs.

3.5 DATA COLLECTION TECHNIQUES

The techniques that were used to collect data were a coding system, an online questionnaire and face-to-face semi-structured interview.

3.5.1 Coding system

The coding system was used to obtain data from the websites, web pages and social media pages of government ministries and traditional national media institutions. The coding system is a set of rules or instructions which are followed to convert content into quantitative data (Bryman, 2012; Neuman, 2014). Gathering and recording of data were conducted through structured observation technique (Neuman, 2014). This technique involved a coding schedule in recording data and a manual to guide the recording of data to improve reliability and objectivity (Bryman, 2012; Neuman, 2014). The data were collected between January 2016 and August 2016.

The collected data related to online interaction, engaging online tools and government information. Regarding online interaction, daily online interaction was recorded in Excel spreadsheets for thirty days while a recording of weekly interaction was undertaken over eight weeks. Additionally, before recording, a researcher signed in on his social media pages as some social media like Facebook required a user to log into the account to access all activities. Signing in also helped to get the right time of postings that was three hours ahead of Greenwich Mean Time (GMT+3) because the time of researcher's accounts is GMT+3.

Under online government information, a number of all publications or information items on government websites was established, the accessibility of each information item was tested, and the relevance of information was examined. The reliability test was conducted as the process was repeated twice. The test result (0.8) indicated that the collected data were reliable. The result is above the recommended minimum score of 0.7 (Nunnally, 1978, as cited in Pallant, 2013).

About online tools on government websites, landing and other web pages were scanned to locate names and icons of engaging features. Furthermore, social media pages were also verified during the construction of the population of government ministries with social media pages, and scores were assigned to all selected government ministries.

3.5.2 Online questionnaire completion

An online questionnaire administration method was chosen from a set of types and communication means to administer a survey questionnaire. There are two ways of completing a questionnaire, which are, self-administered and researcher administered questionnaire (Bryman, 2012; Fricker, 2008; Neuman, 2014). Advancement of communication technologies has led to many different ways to administer a questionnaire, and some technologies influence the level of involvement and presence of the researcher during the completion (Bryman, 2012; Fricker, 2008; Neuman, 2014; Vehovar & Manfreda, 2008).

Regarding technologies, there are print and digital questionnaires which can be completed either by a researcher or a participant (Bryman, 2012; Fricker, 2008; Neuman, 2014; Vehovar & Manfreda, 2008). Means of mediating the print questionnaire are face to face, postal mail and telephone while for digital questionnaires there are Internet-based and non-Internet ways (Bryman, 2012; Fricker, 2008; Neuman, 2014; Vehovar & Manfreda, 2008). The internet-based modes are the web and e-mail while non-Internet computerised means are

Computer Assisted Personal Interviewing (CAPI) and Computer Assisted Telephone Interviewing (CATI), to mention only two of many (Bryman, 2012; Fricker, 2008; Neuman, 2014; Vehovar & Manfreda, 2008).

The web-based questionnaire was chosen because all respondents were Internet literate; it is less costly and less time consuming (Bryman, 2012; Jakob et al., 2005; Neuman, 2014; Vehovar & Manfreda, 2008). Concerning efficiency, money and time to print, photocopy, distribute a questionnaire and collect returns, and enter data on Statistical Package for the Social Sciences (SPSS), were saved as is argued in the methodology literature (Bryman, 2012; Fricker, 2008; Neuman, 2014; Vehovar & Manfreda, 2008).

The questionnaire was self-administered on Bristol Online Surveys (BOS) platform whose link is www.onlinesurveys.ac.uk. The University of Bristol manages this platform (University of Bristol, 2016). I chose it because Aberystwyth University had an institutional account and Postgraduate research students could use that account to carry out surveys of their PhD projects without any payment.

The survey was open between 02 June 2016 and 14 July 2016. This period included the extension of the study and the substitution of non-responses to increase the response rate. Participants were invited to take part in the study using their emails, which contained a unique survey link for each participant to avoid sharing the questionnaire and multiple completions (University of Bristol, 2017).

Four email reminders, which was the maximum number of emails for a survey according to the system (University of Bristol, 2017), were sent out. Those who opted out of the study did not receive reminders (University of Bristol, 2017). Following the suggestion of Fricker (2008), more email reminders were sent out using the researcher's Aberystwyth University email account to assure participants that the survey links were not spammed.

Digital returns and respondent progress were monitored every day. The progress showed a frequency of visiting and abandoning a survey on different pages before submitting it. The first page had a higher frequency of dropping the survey possibly because of internet problem and interruption, and some participants were not interested in the topic (University of Bristol, 2016). The final response rate was 51(25%) out of 205 selected participants.

3.5.3 Face-to-face semi-structured interview

A semi-structured interview was chosen to guide a logical flow of the interview, to make a comparison between cases, and there were specific topics to focus on (Bryman, 2012). Another type of qualitative interview, which gives the maximum freedom, and which can disrupt a plan of topics (Creswell, 2003), is an open-ended interview (Bryman, 2012). Concerning the mode of interviewing, it can also be conducted through telephone or computer-mediated communications such as Skype (Bryman, 2012).

The face-to-face interview was also more convenient, effective and efficient. This kind of interview enriched collected data with a context concerning the participants, such as body language, as they were conducted in their offices. The interviews were prepared and carried out according to face-to-face interviewing procedures.

Preparations for interviews were made as follows: official request letters from REPOA on behalf of the interviewer were sent to selected ministries, and follow-ups were made. The enclosures were copies of the participant information sheet, informed consent form, and Aberystwyth University research ethics approval letter. The replies were provided verbally and by letters; and the interviewer agreed the participants' suggestions for the interview days, time, and venue because of convenience, security and safety. A copy of the interview guide was requested and given before the interview day.

The instruments I used to conduct interviews were a writing pad, pen, and audio recorder, which I borrowed from the REPOA resource centre. I read the sound recorder manual to learn how to use it, and practised audio recording and downloading audio. It was also being tested a few minutes before all interviews to see if it was working correctly.

The interviews had an introduction, questions session and closing. During the introduction, a researcher made a quick self-introduction, informed a participant of the purpose of the study, and defined a concept of online public participation. Participants were also asked to choose either Kiswahili or English language for the interview, and they were free to code switch and mix.

The participants were informed and assured of their rights, such as anonymity, confidentiality, and their right to refuse to answer any of the questions. Participants were also given options of either to have their interviews recorded or not. Of eight participants, four accepted the request to record the interviews. After the introduction, the interviewees were asked questions related to research questions 1, 2 and 4 and probing and prompting were also employed where necessary. During the interview, the researcher was taking notes and monitoring the recording of the interviews of participants who agreed to be recorded.

Before the interviews were closed, the researcher thanked the participants for their time and emphasised that their identities were concealed and that their accounts with their real names would not be disclosed. The interviews were then closed, and to a large extent, they were conducted as planned.

Regarding the time and venue of the interviews, all interviews were carried out in the government offices of interviewees from around 9:00 in the morning and lasted for about thirty minutes. The interviews also took place during the period between 25 January 2016 and 04 May 2016.

3.6 DATA COLLECTION INSTRUMENTS

Three kinds of instruments were used to collect data. These were a questionnaire, observation schedules, and an interview guide.

3.6.1 Questionnaire

This instrument was constructed based on the principles of designing a survey questionnaire such as simplicity and clarity. The don'ts were considered to ensure simplicity and clarity of questions. The don'ts are about the use of jargon, elusiveness, abbreviations, double-barrelled questions, double negative questions, overlapping and unbalanced values (Bryman, 2012; Neuman, 2014). Other don'ts are related to using leading questions, false basis or supposition, distant past and future, emotional and prestige words and questions that exceed the ability of participants (Bryman, 2012; Neuman, 2014).

The design considered the framing of questions and a layout of the entire questionnaire. The design of the online questionnaire was initially done in MS Word and then completed on the BOS platform (see Appendix 1).

3.6.1.1 Framing questions

Participants were asked three intertwined sets of questions which were related to the content, a level of the filter, and a degree of response restriction (Neuman, 2014). The content questions covered knowledge, opinions, behaviour, and demographics (Neuman, 2014). On the level of filtering, questions were the standard format, semi-filtering using options such as "don't know", and full filtering (Neuman, 2014). Standard format questions do not allow filtering, while total filtering questions permit question screening (Neuman, 2014). Regarding a degree of restriction, questions were open-ended, partial open-ended and closed-ended (Bryman, 2012; Neuman, 2014).

Open-ended questions were intended to give the participant maximum freedom to give any answers related to the topics of questions (Bryman, 2012; Neuman, 2014). Furthermore, they were included to avoid setting too many categories,

missing some values of variables and influencing responses of participants (Bryman, 2012; Kent, 2001; Neuman, 2014).

Partial open-ended questions provided participants with room to provide answers apart from the restricted options using an 'other' option (Neuman, 2014). Closed-ended questions restricted the participants to the given options (Bryman, 2012; Neuman, 2014). Sets of categories of partial open and closed-ended questions were exhaustive, mutually exclusive, and pointing at a single dimension to improve validity (Bryman, 2012; Kent, 2001; Neuman, 2014).

'Forced-choice' question format (see questions 7, 8, 9, and 17 in Appendix 1) was used in place of 'tick all that apply' question style to increase response rate (Smyth et al., 2006, as cited in Bryman, 2012), and to tap the potential of their superiority (Bryman, 2012).

Likert scale questions had a neutral option, and one non-Likert scale question had "don't know" option. The neutral position and lack of knowledge options were included in those questions to avoid false negative and false positive answers due to lack of knowledge or social desirability effect (Neuman, 2014). In other words, the neutral and 'don't know' options reduced measurement errors as argued by Bryman (2012) and Neuman (2014).

The neutral or swinging opinion occurs when the participant overstates the attitude and opinion to meet social desirability or understates them to avoid sensitive topics (Bryman, 2012; Neuman, 2014). False positive is when the participant gives the answer while he/ she does not have a view or knowledge of the topic to conceal ignorance and please the researcher (Neuman, 2014). False negative is about when the participant deliberately does not give the response or withholds the response while he/ she has knowledge or opinion (Neuman, 2014).

Most questions had an ordinal scale to obtain richer data (Neuman, 2014) to show a magnitude of responses (Pickard, 2013). Other measurement scales are categorical, interval and ratio. Seventeen questions had ordinal scales, while nine had a nominal. Three questions were grid questions which combined nominal and ordinal scale. Two questions had an interval/ ratio scale.

Pilot survey results led to some changes in values in some questions. The option of mobile phone subscriber identification module (SIM) applications or SMS information service was split into traditional SIM application or SMS information service and modern one, namely WhatsApp (MarketLine, 2014; Sanchez-Moya & Cruz-Moya, 2015). Moreover, more information about the SMS information service was provided.

Some positive options of questions 6 and 23 that were in Likert scale were turned into negative statements using the systematic random technique to reduce response bias (Kent, 2001; Neuman, 2014; Pallant, 2013), that is, choosing the same options for most questions (Bryman, 2012).

A duration of time of experiencing given options of scenarios in question 11 was changed from one year to three years following the reflection on the pilot survey results. According to the feedback, the reason for changing that time was that policy formulation, and reviews do not occur within short periods. However, they are not conducted concurrently. However, it is advised to avoid the distant past because participants may not remember the events (Neuman, 2014).

3.6.1.2 Design

The questionnaire had a total of 31 questions. However, the participants could complete a maximum of 18 questions because there was an option of skipping questions that were not relevant to them as stated by Bryman (2012), Fricker (2008) and Neuman (2014). The estimated time to complete the questionnaire was 30 minutes.

I divided the questionnaire into nine sections, which reflected specific research questions and demographic characteristics. The last section was about characteristics of participants such as gender and income.

Mapping of question filtering was conducted, and four major routeings were identified and were done automatically on BOS platform (University of Bristol, 2016). Minor skipping questions with two parts, which was not automated, was also introduced in the survey. Routeing was used to permit skipping of questions irrelevant to participants (Bryman, 2012), to reduce errors (Bryman, 2012), a degree of fatigue to read questions and to make a survey more investigative (University of Bristol, 2016).

Instructions, meanings and examples of some concepts were also included in the questionnaire (Bryman, 2012; Kent, 2001; Neuman, 2014; Pickard, 2013). The main objective of including this additional information was to improve the reliability and validity of the results (Bryman, 2012; Neuman, 2014). In other words, to ensure that the meanings of concepts and the approach to answering questions are the same between the researcher and all participants (Neuman, 2014). Additionally, it was done to make sure that they were also the same across participants (Neuman, 2014).

However, only in question 20, was the term government unpacked in brackets as a ministry, department and agency. This elaboration might affect the meaning of the government in the previous and following questions (Neuman, 2014). This question was intended to see if participants also visited the social media pages of government departments and agencies, but this is contrary to the principles of questionnaire design (Neuman, 2014). This violation was realised, but the error was not corrected in order to maintain standardisation because the survey was already open (Bryman, 2012; Neuman, 2014), and University of Bristol (2016) cautions that any changes would corrupt responses

The questions were in different formats and orientations, such as vertical and horizontal, especially for closed-ended questions (Bryman, 2012; Neuman, 2014). The formats of the closed and partial open-ended questions were multiple choices, multiple-choice single answer, rank/ scale, and grid while open-ended questions were in the single line free text. Moreover, participants could also complete all matrix questions in Tableless format. The orientation of values of non-matrix question format was vertical rather than horizontal to avoid confusion, which could affect the accuracy of responses (Bryman, 2012; Neuman, 2014).

Each question was presented on one page to put together questions and answers (Bryman, 2012; Neuman, 2014) and to allow the questionnaire to be completed on any digital device. Question numbers were also on each web page, and navigation arrows were clearly shown. The progress of completion was in percentiles, and participants could move forward and backwards to make any changes before pressing the finish button.

3.6.2 Structured observation schedules and guides

Schedules and guides were prepared to record the presence of online tools and the availability of information on government ministries' websites. They were also used to record frequencies of activities on engaging online features of government ministries and traditional national media such as social media pages. Each schedule had a guide to ensure reliability and objectivity (Bryman, 2012; Neuman, 2014).

The schedules had different variables as follows: firstly, for the presence of online government engaging tools, the following key variables were included: Facebook page, Twitter account, YouTube channel, Blog, Forum, Poll, Survey, Petition, and Referendum. These variables had two values, which were one and zero. Zero stood for absence or NO, and one for presence or YES. Other variables were names of social media pages, their addresses, and start dates.

Secondly, for the availability of information on websites of government ministries, websites had the following main variables: policy, legislation (Act/ Regulations); plan/ strategy/ programme/ project, budget books/ speech, report, and statistics. The values of these variables were based on a continuous scale of zero to one. These values were obtained by dividing downloadable/ accessible information by a total of accessible and inaccessible information. Other variables were government ministry name, website address, date of observation, downloadable or accessible information, inaccessible information, date of information, and relevancy (see Appendix 2).

Thirdly, regarding online activities, variables were specific for Facebook pages, Twitter accounts, YouTube channels and active, interactive websites because they have different features (Bertot, Jaeger, & Derek, 2012; Lipschultz, 2015). Other variables were related to time units such as a day, a week and a year.

Lastly, apart from these coding schedules, a software package of Network Analysis called Network Overview, Discovery and Exploration for Excel (NodeXL) (Smith et al., 2010) was used to record interaction on Facebook pages.

As in questionnaire design, relevant principles were considered in designing the schedules and guides. First, there were no overlaps of conceptual meanings of categories (Bryman, 2012; Neuman, 2014). Second, the guides were somewhat clear because they reflected the recording schedules (Bryman, 2012). Lastly, the schedules and guides were tested several times and were improved before the primary fieldwork began (Bryman, 2012; Neuman, 2014).

3.6.3 Interview guide

The interview guide is the requirement for a semi-structured interview (Bryman, 2012). The guide had a list of questions that were related to research questions 1, 2 and 4, but it did not prevent the interviewer from asking new questions and probing (Bryman, 2012).

The master interview guide, which was in tabular format, consisted of the following items. One, six demographic questions, eleven behavioural and cognitive questions. Two, the definition of critical concepts in some questions and the rationale for asking such questions. Three, objectives for each question, and methods of analysis such as pre-coding or topics or themes for some questions, typology of qualitative findings according to qualitative synthesis analysis (Sandelowski & Barroso, 2007). Last but not least, guiding notes for some questions that required probing.

Since participants requested a copy of a set of questions before the interviews. Two versions of the guide were prepared based on the master interview guide. One version, which did not have demographic questions such as gender, was for interviewees, while the researcher's version contained those variables. Those variables were omitted from the interviewee's version because they were apparent to the interviewer. Moreover, both interviewer and participant's versions did not have the rationale part because it was not relevant to participants and interviewer during the interview.

There were English and Kiswahili versions of the interview guide. The first final draft of the guide was in the English language, and then it was translated into Kiswahili language by the interviewer (see Appendix 3).

Some changes were made regarding the wording of questions to break down multiple topics into different questions during the first three interviews. The primary purpose of re-wording questions was to improve simplicity and clarity as it is recommended in the questionnaire (Bryman, 2012). It also helped participants to think and reflect on their experiences, and to maintain a smooth flow of the interview (Bryman, 2012).

For example, during the first set of interviews, it was noticed that there were double-barrelled questions. An example of the barrelled question was, 'Does this ministry have a website and social media; for instance, Facebook page, Twitter

account, and YouTube channel?’ During the rehearsal, this question was expanded to two questions to cover a website and social media separately. However, this issue was also addressed during the first three interviews using follow-up questions.

3.7 DATA ANALYSIS METHODS

The data were prepared and analysed to answer research questions 1, 2, 3 and 4.

3.7.1 Data preparations for analysis

All data that were collected using survey, web content analysis and interview methods were prepared for the analysis.

The preparation of survey data took place on BOS platform and SPSS software package based on quantitative data cleaning procedures as discussed by Kent (2001) and Pallant (2013) (see Table 3.4). Since there were three similar surveys which were conducted separately, they were merged using BOS functionality of merging identical surveys (University of Bristol, 2016). Then all survey responses were exported to SPSS package, which is a quantitative analysis tool (Bryman, 2012).

Table 3.4. The Process of Preparation of Survey Data for Analysis on SPSS Program

Stage	Procedure
1.	Matching measurement scales with scales in the survey questionnaire
2.	Changing a variable type from ‘String’ to “numeric.”
3.	Coding responses of “other” option (coded values were added to questions through transforming variables – recoding into a different variable to retain the original variable (Pallant, 2013))
4.	Responses to “other” coded values were re-entered on SPSS manually
5.	Replacing missing values in filtered questions with ‘Not applicable.’
6.	Checking the logic of responses using frequencies, case summaries, and range
7.	Correcting errors in the logic flow of responses

Data from web content analysis were in quantitative and qualitative form. Quantitative data were prepared on Excel and SPSS while qualitative data, which concerned headings of posts on interactive media, were prepared on Word, as indicated in Table 3.5.

Table 3.5. The Process of Preparation of Observation Data for Analysis

Stage	Procedure	Tool
1.	Summarising data collected on a daily basis	MS Office Excel
2.	Computing time difference between posts, comments and replies	MS Office Excel
3.	Sorting data chronologically	MS Office Excel
4.	Importing some quantitative data to SPSS	SPSS
5.	Recoding a date variable into 'DummyDate' variable	SPSS
6.	Transforming three-unit time variable into a one-unit variable – an hour	SPSS
7.	Listing post headlines or synopses	MS Office Word
8.	Uploading word files with post headlines on NVivo program. NVivo program, which is the tool for qualitative analysis (Bryman, 2012; Sandelowski & Barroso, 2007)	NVivo program

Similarly, as indicated in Table 3.6, the interview data were organised before carrying out the analysis.

Table 3.6. Process for The Preparation of Interview Data for Analysis

Stage	Procedure	Tool
1.	Transcribing audio and manually interviews	NVivo, paper and pencil
2.	Translating Kiswahili transcripts into the English language	Cambridge Advanced Learner's English Dictionary
3.	Cleaning and editing transcripts (removing paralogues and correcting English grammatical errors)	MS Word, Cambridge Advanced Learner's English Dictionary, Grammarly
4.	Distinguishing between interviewer name, participant name, interview questions, and the participant's responses using italics and colour coding	MS Office Word
5.	Uploading transcripts on NVivo program	NVivo program

3.7.2 Data analysis approaches

Prepared data were analysed quantitatively and qualitatively.

3.7.2.1 Quantitative methods

Descriptive statistics and statistical tests were carried out to analyse quantitative data. Descriptive statistics were frequencies and percentages, and cross-tabulation, measurement of central tendency and dispersion (Field, 2013; Kent, 2001; Pallant, 2013).

Frequencies and percentages were used to show the magnitude of values of measured variables (Reichmann, 1961). Frequencies are actual data, while percentages are a representation of actual data (Reichmann, 1961). Percentages were used together with the count to enable comparison of data in a complete data set and a sub-sample, to highlight changes, and to show the arrangement of magnitude (Field, 2013; Reichmann, 1961). They were also used concurrently because the percentage does not substitute original data (Reichmann, 1961).

Measurement of central tendency and dispersion were also used to carry out descriptive analysis (Kent, 2001; Pallant, 2013). Central tendency measures (arithmetic mean, median, and mode) showed average scores while measures of dispersion (variance, range, and standard deviation) indicated distribution of scores (Bryman, 2012; Field, 2013; Marczyk et al., 2005; Morgan, Reichert, & Harrison, 2017; Neuman, 2014; Norris, Qureshi, Howitt, & Cramer, 2012; Pallant, 2013).

Crosstabulation enabled comparison of frequencies and proportions of cases that appear in values of two or more variables concurrently (Bryman, 2012; Field, 2013; Kent, 2001). The variables were in columns and rows, and the frequencies and proportions were read across the columns (Norris et al., 2012; Pallant, 2013).

Histogram, P-P plot, and normal distribution curve are tests of distribution of scores of a continuous variable (Field, 2013; Pallant, 2013). These tests were used to examine a normal distribution of frequencies of scores on the dependent variables before deciding on whether to use a parametric or non-parametric test (Field, 2013; Pallant, 2013). The histogram is the graph which shows cumulative frequency distribution using bars while the normal distribution curve shows either a bell-shaped line, skewness or kurtosis (Field, 2013). With the normal distribution curve, the distribution of scores is normal when the skewness and kurtosis are zero (Field, 2013).

The P-P plot is also the graph which shows the cumulative probability of the actual scores against the ideal cumulative probability of scores (Field, 2013), in this context, normal distribution. The distribution of frequencies is normal when the actual scores align with a diagonal, which represents an ideal normal distribution (Field, 2013). The diagonal is the assumption that cases are heterogeneous, but their covariance is zero. The P-P plot test is identical with Q-Q plot, but the Q-Q plot uses quantiles instead of the cumulative probability of

scores (Field, 2013). Q-Q stands for quantile-quantile, while P-P is the acronym for probability-probability (Field, 2013).

Two statistical tests, Fisher's Exact Probability test and Spearman Rho, were conducted to determine relationships between variables. Fisher's Exact Probability test, which is an alternative to the Chi-square (X^2) test for small samples (Field, 2013; Morgan et al., 2017) was chosen because a sample size of survey participants was small. Spearman Rho was selected because dependent variables were not normally distributed (Field, 2013; Neuman, 2014; Pallant, 2013). It is a non-parametric test which does not follow the assumptions of the normal distribution (Field, 2013; Morgan et al., 2017; Pallant, 2013).

3.7.2.2 Qualitative methods

Unlike quantitative analysis, in qualitative research, there are no clear rules and assumptions for analysis because of the richness of data, and more flexibility (Bryman, 2012). However, coding appears to be the primary approach to analysing textual data (Bryman, 2012; Sandelowski & Barroso, 2007). Coding is a procedure of identifying and organising topics, themes, and concepts, which are emerging from data and their relationships (Bryman, 2012; Sandelowski & Barroso, 2007; Silverman, 2013) (see Appendix 4).

There are two ways of conducting coding on NVivo program. Those ways are automatic and manual coding (QSR International, 2016a). Manual coding was selected because the number of questions in the transcripts varied (QSR International, 2016a). To a large extent, coding was carried out along with creating nodes while reading and re-reading one interview after another (QSR International, 2016a). The coding process involved creating, merging, renaming, aggregating nodes, decoding and internode coding, refining, removing and shuffling references to arrive at clear topics, themes and concepts (Saldana, 2013).

The conceptual analysis was employed to analyse qualitative data, which were gathered from participants F. This kind of analysis is one of the stages of the framework of synthesising qualitative research, which was pioneered by Sandelowski & Barroso (2007). This step entails exporting identified topics and themes to the theory, which underpins the research (Sandelowski & Barroso, 2007). The last stage of their approach was excluded from the analysis because it appears to be similar to conceptual analysis as the theory guides the interpretation (Booth et al., 2008; Neuman, 2014).

The qualitative analysis had two categories of concepts, which originated from the literature, conceptual and theoretical frameworks. From the conceptual framework, the concepts were the website, social media and decision-making tools, e-participation, e-information, e-consultation and e-decision-making. According to the theoretical framework, the main concepts were the innovation features, communication channels, time and social system. These concepts shed light on the main assumptions of the Diffusion of Innovation theory.

The analysis also included the aspects of the main concepts from the theoretical framework. For example, innovation features were relative advantages, complexity and compatibility while time covered innovativeness, innovation-decision process and adoption rate (see Appendix 4).

3.7.3 Data analysis tools

Social Network Analysis (SNA), Sophistication Index (SI), SPSS, NVivo, and NodeXL were used to analyse collected and prepared data.

A SNA tool was used to analyse the density of online interaction, which formed social networks. SI was employed to measure the magnitude of online interaction and the availability of online government information and engaging features. According to Hollstein (2014), Wasserman and Faust (1994) as cited in Pryke (2012), a social network is a set of actors such as people and relations between them. It has a boundary which might be related to role and time (Pryke, 2001, as

cited in Pryke, 2012). It comprises nodes (actors) and connections (links/ relation/ edges) (Hollstein, 2014; Pryke, 2012). The actor's role is to transmit (out-degree) and receive (in-degree) messages (Pryke, 2012). An actor with both roles is a carrier (Pryke, 2012). The line which connects two nodes is called a dyad (Carrington, 2014; Pryke, 2012).

The structure of a network is measured graphically by vertices and edges that are separated by a comma (McBirnie, 2012). Symbolically, the structure is $G = (V, E)$, where G stands for a graph, V means a vertex, and E represents an edge (McBirnie, 2012).

There are three modes of networks which are one-, two-, and multi-mode (Pryke, 2012). One-mode network means actors in the network are homogenous – one set of actors and one set of events (Pryke, 2012). The network of two sets of actors and one set of events is called a two-mode network (Pryke, 2012). Multi-mode network means many sets of actors and one set/ many sets of events (Pryke, 2012). Networks in this study had two actors and were bound with time, which was about 30 days at the time of fieldwork from January 2016 to April 2016.

The connectedness of actors in the network varies depending on the number of actors and edges (Carrington, 2014; Pryke, 2012). The measure of network cohesion is called a density (Carrington, 2014). The density enables comparison between different networks (Carrington, 2014). Density is a proportion of the total number of observed and expected links between nodes if all nodes are connected (Carrington, 2014; Pryke, 2012). The coefficient of density ranges from zero to one (Pryke, 2012), and can be represented by percentages by multiplying it by a hundred (McBirnie, 2012). Moreover, denser networks have a higher flow of information than less dense networks (Carrington, 2014; Hollstein, 2014). Large networks tend to be less dense because when more actors are connected, more expected edges will also increase (Carrington, 2014).

The density of each network was computed using nodes and edges (Carrington, 2014). To get a number of expected edges, compute densities efficiently and accurately, NodeXL, which is an add-in for Microsoft Office Excel (Smith et al., 2010), was employed.

I selected the SI tool because Bonson et al. (2012) and Holzer and Kim (2006, 2008) also used it to rate use of online information and communication features. Prior to rating, Bonson et al., and Holzer and Kim used the tool to compute shares of such features. The elements of an SI are a number of entities, measured aspects, and a score for each aspect from each entity (Bonson et al., 2012; Holzer & Kim, 2006, 2008). Therefore, the SI score is the ratio of a total score for each aspect and the total number of entities (Bonson et al., 2012; Holzer & Kim, 2006, 2008). The SI score ranges from zero to a total number of all entities and can be converted to percentages to view the magnitude and comparison more clearly (Bonson et al., 2012; Holzer & Kim, 2006, 2008).

Based on the formula of SI, a total score of each category of information and the engaging online feature was divided by a total number of government ministries to get an SI score. A maximum score is the size of the sample, while a minimum score was zero. Each SI score was then converted to a percentage by dividing the SI score by a maximum score, and then a quotient was multiplied by a hundred (see Tables 4.1, p. 119; 4.2, p. 121; 4.3, p. 121).

As introduced in this section, different computer research tools like SPSS program were also used to analyse quantitative and qualitative data.

A SPSS program was used to analyse survey and quantitative content analysis data. The program facilitated a view of data and variables, the transformation of variables, and analysis of data (Bryman, 2012; Field, 2013; IBM Corporation, 2015; Norris et al., 2012; Pallant, 2013). Regarding transforming variables, the values of some variables were collapsed and formed new variables using recoding variables into different variables functionality; for example, the creation of binary

variables (IBM Corporation, 2015). Date and time wizard functionality was also used to prepare web content analysis data for analysis (IBM Corporation, 2015).

Spearman Rho correlation test, reports and descriptive statistics, which are under analyse function, were also performed (IBM Corporation, 2015). Reports functionality was used to generate case summaries while descriptive statistics were P-P plots graphs, crosstabulation and Fisher's Exact Probability test, and frequencies (IBM Corporation, 2015). Also, SPSS generated central tendency and dispersion statistics, histogram and normal distribution charts (IBM Corporation, 2015).

NodeXL is one of the computer network analysis programs to collect social network data online, analyse them quantitatively, and generate visualisations of social networks (Smith et al., 2010). It is an add-in for Excel (Smith et al., 2010). NodeXL enhanced collection of data from Facebook pages of government ministries and traditional national mass media (Smith et al., 2010). It also enabled a reduction of the size of files, weighted edges and vertices, using GraphML files functionality to run analysis more efficiently (Smith et al., 2010).

The program has workbooks that have different spreadsheets such as edges, vertices and graph metrics (Smith et al., 2010). An edges sheet was used to identify relationships between nodes, reaction types such as like, post content, replies and many other elements of networks (Smith et al., 2010). A vertices sheet enabled the presentation of a number of comments received and created for each actor, names of nodes, demographic features of actors, to mention a few (Smith et al., 2010). A graph metrics sheet was used to generate network density, a number of edges and vertices (Smith et al., 2010).

The NVivo Program is one of the computer programs whose primary function is to analyse qualitative data (Bryman, 2012; QSR International, 2016b; Sandelowski & Barroso, 2007). The program made the coding process easier to undertake than manual coding on print interviews (Bryman, 2012; Sandelowski & Barroso, 2007).

Five major functionalities, which are Create, Data, Analyse, Query, and Explore, were used to conduct analysis (QSR International, 2016a).

Concerning Create, nodes, cases and classification of cases and sources were established (QSR International, 2016a). Data functionality facilitated import of interviews in text and audio format, the export of codebook, items such as nodes, and items on the view (QSR International, 2016a). Analyse enabled coding of text interviews by creating, locating and selection of nodes to recode and uncode (QSR International, 2016a).

The query function was used to conduct content analysis while Explore enabled a comparison between and within nodes and cases using diagrams, and it also facilitated a cluster analysis (QSR International, 2016a). This functionality also enabled exploration of cases, sources, parents and children nodes using diagrams (QSR International, 2016a).

To a large extent, these computer tools improved efficiency, effectiveness, reliability and accuracy in addressing research questions 1, 2, 3 and 4.

3.7.4 Data presentation

Figures, tables and quotations presented data. Figures and tables were mainly used in quantitative analysis while quotations were in the qualitative analysis because of the nature of data. The former may help readers understand messages of the analysis without many efforts (American Psychological Association, 2010; Booth et al., 2008; Howe, 2016; Morgan et al., 2017), and also they store primary data (American Psychological Association, 2010).

Quotations, which are parts of coded interview data, are hallmarks of qualitative research (Sandelowski & Barroso, 2007, p. 248). The primary function of quotations is to authenticate the analysis (Geertz, 1988, as cited in Sandelowski & Barroso, 2007) while the general purpose is to enliven qualitative research as numbers do in quantitative approach (Sandelowski, 1994). Authentication shows

that empirical data were collected scientifically from the natural setting (Richards, 1998, as cited in Sandelowski & Barroso, 2007).

Quotations also provide compelling evidence of individuality and diversity among the participants (Richardson, 1990, p. 40, as cited in Sandelowski & Barroso, 2007), and particularities of everyday life (Golden-Biddle & Locke, 1993, p. 601, as cited in Sandelowski & Barroso, 2007). Moreover, they distinguish between quantitative and qualitative narratives (Kent, 2001).

Based on these arguments, this study also included some quotations to tap their value in qualitative scientific studies.

3.8 LEGAL AND ETHICAL ISSUES

The research process that involves human beings is very likely to affect their fundamental rights such as privacy, respect, safety, and autonomy at different levels (Aberystwyth University, 2014a; Creswell, 2003; Marczyk et al., 2005). To ensure that the rights of participants are observed during the research process and publication of the outputs, ethical and legal research standards were introduced (Marczyk et al., 2005). A researcher is required to treat research participants with respect, kindness, and justice; and researches with integrity and according to the law (Aberystwyth University, 2014a; Creswell, 2003; Marczyk et al., 2005).

Since this study also involved people as sources of data, legal and ethical research issues were followed to minimise any adverse effects on the respondents and the researcher (Aberystwyth University, 2014a; Marczyk et al., 2005). Integrity was also ensured during data collection and analysis to produce real knowledge that would be beneficial to society. The recommended principle approach to fulfilling the obligation of protecting participants' rights was observed through informed consent (Aberystwyth University, 2014a; Creswell, 2003).

3.8.1 Research ethics approval

Aberystwyth University Research, Business, and Innovation department granted research ethics approval for this study through the Department of Information Management, Libraries and Archives (iMLA) research ethics committee which was chaired by Professor David Ellis. Formerly, this department was known as Information Studies (Aberystwyth University, 2019). A proposal of this study was submitted electronically, and an application with the reference number 1956 was approved.

3.8.2 Informed consent

Selected respondents were informed about the purpose of this study, which is to examine e-participation adoption in Tanzania to inform the debate and knowledge contribution to the e-participation field. For trust and credibility purposes, the sponsor of this study was indicated as well (Creswell, 2003). Participants were also informed that their rights would be observed in the course of their participation (Aberystwyth University, 2014a; Creswell, 2003; Marczyk et al., 2005). They were also told about the duration of the study and the size of a sample of participants, the way it was obtained and the reasons for their inclusion.

The reasons for their inclusion in a survey sample were Tanzanian citizenship, full-time employment, being a researcher or academic, Dar es Salaam resident, being 18 years old or above. Another reason was the possession of Internet skills. For the interview, the reason was being a public official of the department of policy and planning at the government ministry.

Aberystwyth University research ethics templates were used to prepare information sheet and informed consent form for this study (Aberystwyth University, 2014b). For the interviews, the participants and the researcher signed two copies of the informed consent for future reference, and evidence of protecting the human rights of participants (Aberystwyth University, 2014a;

Creswell, 2003) (see Appendix 5). To save time, the participants signed the form immediately after the interview while the researcher did it later after the interview. The form was then scanned and sent to them via email, and they acknowledged its receipt.

Since the inquiry was also conducted online, survey participants were asked to click on either an accept or decline button before continuing (Aberystwyth University, 2014a). This part was mandatory, and no respondent managed to proceed without selecting the acceptance option. Those who were screened out were reminded of the informed consent and were asked to repeat the process if they declined by mistake.

3.8.3 Protection of participants

Respondents were protected from any harm, especially emotional harm which could result from responding to questions that were related to their privacy and sensitive information such as exact age. This problem was considered during the design of the interview guide and questionnaire (Bryman, 2012; Neuman, 2014). For the interview venue, the participants proposed convenient physical places, and all of them preferred their government offices, which were also convenient for the researcher. The researcher communicated interview programme, time and location to his employer and some colleagues for his safety.

3.8.4 Rights of participants

Research participants had rights to withdraw from the study at any time point, to refuse to answer any questions without giving any reasons, and they were not penalised (Aberystwyth University, 2014a; Creswell, 2003; Marczyk et al., 2005). For example, BOS provided progress information on the survey completion, which indicated that some participants did not complete the survey, but they were not requested to give any reason. However, a few of them gave some reasons like poor Internet connectivity for not completing the survey at their discretion.

3.8.5 Privacy, confidentiality and anonymity

This research does not disclose any aspects of respondents which were related to their private life, and their physical and online identities that linked to their responses. As indicated above, the real identities of participants were disguised using alphabets and Roman numerals, respectively (Aberystwyth University, 2014a; Creswell, 2003; Sumerson, 2014). Additionally, quantitative analysis obscured the identities of survey participants (Creswell, 2003; Patton, 2002).

All clues of identities of interview participants were also replaced with a label in square brackets, especially in quotations (Creswell, 2003; Sandelowski & Barroso, 2007). Interview participants were informed in advance that there was difficulty concealing their identities, they would participate in interviews on an 'on the record' basis (Aberystwyth University, 2014a). 'On the record' means a researcher reveals participants' identities, but their names are only related to the data they give during the actual interview while excluding 'off the record' data (Aberystwyth University, 2014a).

3.8.6 Data protection and copyright

All data in different formats were stored securely, and their access was restricted to the researcher, and appropriately authorised University academic personnel for supervision and quality control (Creswell, 2003; Sumerson, 2014).

Print data were kept securely in the lockable file cabinet located in the PhD room in the Department, Rheidol Building and student's campus room. Digital data were stored on Aberystwyth University ICT infrastructure – M-Drive (linked to the researcher's laptop via 'file transfer protocol'), and OneDrive; and investigator's laptop, pen drives, and an external hard drive.

Data were discarded immediately after final submission and acceptance of the final draft thesis for a degree award (Sieber, 1998, as cited in Creswell, 2003). Audio-recorded interviews were permanently deleted from the audio recorder

before it was returned to REPOA resource centre as the ethics require (Aberystwyth University, 2014a; Marczyk et al., 2005).

In relation to copyright, results were written in the form of a doctoral thesis and deposited in the Aberystwyth University Library, National Library of Wales, and REPOA Resource Centre. The results might also be published in full or parts as scholarly journal articles. The findings might also be used to engage the public for more awareness and bringing about a positive impact on public participation.

3.8.7 Gender

In the survey, both male and female participants were included proportionally, but an exception occurred in the interview because the selection of government officials was very much dependent on their positions, and it was non-random. In the web content analysis, it was hard to establish the gender of participants who interacted in online public spaces.

3.8.8 Integrity

Data falsification or kerb stoning and poor crediting of content owners were avoided at all cost (Sumerson, 2014). Findings based on data and interpretations were done objectively, systematically, and in a trustworthy way; that is, findings were not suppressed and invented as Neuman (2000) as cited in Creswell (2003) discusses. This chapter has sufficient details to let the audience decide on the credibility of this research as Neuman (2000) as cited in Creswell (2003) suggests.

3.9 SUMMARY

The selected methodologies, methods, techniques, procedures and tools indicated the approach which was followed to collect and analyse data, and provide appropriate answers to the research questions 1, 2, 3, and 4. Populations of this study were identified, and their samples were selected through probability and non-probability sampling strategies depending on the design of this research, time, cost and means of collecting data. Cases were assigned group

labels to differentiate them in this summary, and in the analysis, discussion and conclusions chapters. Cases in groups A, B, C, and D provided data through qualitative and quantitative analysis. Participants in group E gave data through an online self-administered survey while participants in group F did that via face-to-face semi-structured interviews. Since this study also involved human beings, legal and ethical process and procedures were followed to minimise any violation of legal and human rights.

4 QUANTITATIVE AND QUALITATIVE CONTENT ANALYSIS RESULTS

As indicated in Table 3.2, on page 74, content analysis was of the three research methods. The generated data answered research questions 1, 2, 3, and 4, but the aspect of the utilisation of e-information opportunities was not answered because it was not possible to measure it accurately. Data sources group labels (A, B, C and D) will be used in this chapter because different categories of cases provided data through this method.

4.1 SAMPLE CHARACTERISATION

Group A cases have websites whose top-level country code name is '.tz', and the government domain name is '.go'. One of the webpages of their websites is a publications page, and on those websites, there is also a feedback form. Additionally, all cases were headquartered in Dar es Salaam.

As Table 4.1 shows, none of the cases in group A adopted e-petition, e-referendum, online forum and survey while only case A₈ accepted an e-poll. Furthermore, some cases in group A (n=6) had social media pages like Facebook pages and Twitter accounts. In terms of magnitude, none of the social media pages scored above 38 percentage points. Moreover, Facebook ranked higher than blog and Twitter, while blog was the second one (see Table 4.1). On average, the adoption of engaging online features was low (11%) compared to a website (100%) because of the optional innovation-decision.

Table 4.1. Proportion of Government Deployment of Engaging Online Features

Engaging online feature	No. of group A Cases	Score (Max=8, Min=0)	%
Facebook	3	3	38
Blog	2	2	25
Twitter	1	1	13
e-Poll	1	1	13
e-Petition	8	0	0
e-Referendum	8	0	0
Online forum	8	0	0
Online survey	8	0	0

Source: Fieldwork Data, 2016

In addition to a website, group B had signed up on social media. Case B₁ has a Facebook page, Twitter account and YouTube channel; cases B_{3,4} only have Facebook pages. Case B₂ has a Twitter account and YouTube channel.

By April 2016, the ages of social media pages of cases in group B ranged from 1.2 to 4.4 years. The age of Facebook pages of cases B_{1,3,4} was 3, 4.4 and 1.2 years, respectively. For Twitter accounts, the age of accounts of cases B_{1,2} was 4.2 years, while that of case B₃ was 2.7 years. The age of YouTube channels of cases B_{1,2} was about 3.4 years.

Group cases C_{1,3,4} are TV stations while C₂ is a newspaper. Concerning ownership, Mwananchi Communication Limited, whose headquarters are in Dar es Salaam, own case C₂. Cases C_{1,3} are the private TV stations while Case C₄ is a state TV station. IPP Media, whose headquarters are in Dar es Salaam, runs case C₁. Case C₄ is also headquartered in Dar es Salaam. Sahara Media Group Limited owns case C₃, which is headquartered in Mwanza.

Cases C_{1,2,4} have Facebook pages, Twitter accounts and YouTube channels. Case C₃ only has a Facebook page, and only case C₂ has an active, interactive website. By April 2016, the age of Facebook page, Twitter account and YouTube channel of case C₁ were about four years each. For case C₂, they were 4.3, 6.8 and 3.8

years, respectively. Again, for case C₄, they had existed for 2.3, 2.3 and 1.2 years, respectively. The Facebook page of case C₃ had existed for 4.7 years.

Demographic features of Participants in group D such as age and gender were not apparent. Possibly, they decided not to expose themselves to the public. Although the names of some participants indicated that there were males and females, some people do not use real identities on their social media pages (Schmidt & Cohen, 2013). Furthermore, as Figure 4.1 depicts, some group D participants (n=214) performed activities on social media pages of both cases in groups B and C.

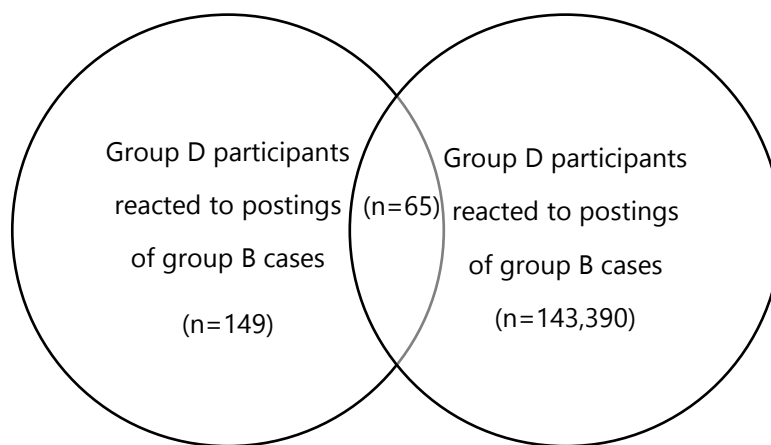


Figure 4.1. Group D participants who reacted to postings of both group B and C cases. Source: Fieldwork data, 2016

4.2 OPPORTUNITIES FOR INFORMATION ON THE GROUP A CASES' WEBSITES

Except for case A₃, all cases in group A provided information via their websites, but as Table 4.2 depicts, there were variations across information categories like policies and legislation. For example, except for budget speeches and legislation, scores of other information types combined hovered at around 50. The rate of opportunities for budget speeches was higher than the rest while the legislation ranked second from the top. However, the opportunities for budget speeches did not reach the highest level, which is 100%.

As there were variations across information categories, their scores were combined to establish their average rate. The average score revealed that the magnitude of e-information opportunities provision was 57%.

Table 4.2. Provision of Online Information Opportunities Based on Information Categories

Information category	Score (Min = 0, Max = 8)	%
Policy	4.00	50
Legislation (Act/ Regulations)	4.92	62
Plan/ Strategy/ Programme/ Project	4.38	55
Budget speech	6.80	85
Report	3.66	46
Statistics	3.66	46

Source: Fieldwork data, 2016

As observed in the provision of e-information opportunities across information categories, there were also variations across group A cases (see Table 4.3). Cases A_{7,8} fell in the upper quartile, cases A_{1,2,4,6} in the interquartile range while cases A_{3,5} were in the lower quartile. Moreover, surprisingly, case A₃ did not give any e-information opportunities while case A₅, which oversees the information and media sector, ranked second from bottom.

Table 4.3 Provision of Online Information Opportunities by Group A Cases

Case	Score (Min=0, Max=6)	%
A ₈	5.00	83
A ₇	4.66	78
A ₂	4.23	71
A ₆	4.00	67
A ₄	3.00	50
A ₁	2.58	43
A ₅	1.00	17
A ₃	0.00	0

Source: Fieldwork data, 2016

The discretionary powers the government gives to the cases in group A to decide on whether to provide e-information opportunities on their websites influenced these patterns of adoption of e-information.

4.3 OPPORTUNITIES FOR ONLINE INFORMATION AND ENGAGEMENT OF GROUP B CASES WITH GROUP D PARTICIPANTS

Similarly, social media pages of cases in group B were examined to reveal whether e-participation opportunities were given and utilised by the public, including group D participants. Cases in group B provided some e-participation opportunities like information via their social media pages. However, not all of them did that continuously as they signed up on such platforms.

Moreover, for thirty days, an activity of posting information and news on social media pages of group B cases was observed. As Table 4.4 indicates, except for case B₁, the rest posted news and information, but they did not do that every day. The exception was case B₁, which never posted anything during that period. Regarding the frequency of posting on a daily basis, these instances revealed that the provision of e-participation opportunities via social media pages was limited.

Table 4.4. Number of Postings on Social Media Pages of Group B Cases

Case	Facebook Pages		Twitter Accounts		YouTube Channels	
	Count	%	Count	%	Count	%
B ₁	0	0	0	0	0	0
B ₂			23	100	2	100
B ₃	14	77.8				
B ₄	4	22.2				
Total	18	100	23	100	2	100

Note. Blank means Not Applicable

Source: Fieldwork data, 2016

Furthermore, based on categories of platforms, there were more postings on Twitter accounts (53%, n=23) than Facebook pages (42%; n= 18) and YouTube

channels (5%; n=2). Additionally, as the data revealed, postings on YouTube channels were fewer (5%; n=2) than on Facebook pages (42%; n=18). According to the data collection method, the most likely reason for this pattern was not established, but platforms features might have influenced such a pattern. A further investigation is required to identify the most likely influencing factors of this pattern.

Thematically, case B₂ posted information and news on their social media pages about international matters while except for case B₁, all cases B_{2,3,4} posted on national issues. Some examples of headings of information and news on international issues are as follows:

“Burundi crisis talk press statement.” (Case B₂)

“Foreign ministers meet with East African Legislative Assembly (EALA) members from Tanzania.” (Case B₂)

“Dr Komba enters EALA chamber.” (Case B₂)

National information and news were further divided into four subjects, which are government, elected representative bodies, political issues and social-cultural-economic affairs. In this case, the government theme comprises all matters such as policies, legislation, judicial, law enforcement, by-laws, tax and fees, and all other matters which are related to central and local government. Representative bodies are about parliament, the house of representatives and councils matters. Political issues consist of national politics like elections, election results disputes, national political parties’ meetings and critiques levelled against the government.

The examples of postings about government matters are:

“Dr John Pombe Magufuli appoints Dr Mahadhi ambassador.” (Case B₂)

“Dr Mahiga meets with United Nations Children’s Fund (UNICEF) delegates.” (Case B₂)

“Natural resources business government notice.” (Case B₃)

“Minister suspended Tanzania Forest Services director and its officers from today.” (Case B₃)

"Government notice on traditional and herbal healing to the public." (Case B₄)

Similarly, postings about elected representatives' bodies included:

"President's Bunge inaugural speech." (Case B₂)

Likewise, there is one posting on social-cultural-economic affairs.

"Poachers downed the helicopter." (Case B₃)

Cases in group B never posted anything on political issues, possibly because the government norm does not permit that. Furthermore, none of the postings invited citizens to participate in any decision-making processes, which are policy orientated. Moreover, neither of the postings were related to feedback about policy decisions. The data could not reveal the most likely reasons for the absence of citizens' engagement and feedback, although possibly there was no such process during or before the data collection.

As Table 4.5 shows, some participants in group D (n= 214) reacted to the postings of cases B_{2,3,4}, which were observed for thirty days. Reactions were activities like commenting, liking and disliking. There was a total of 1,057 reactions. On average, there were 35 reactions in a day. Additionally, there were more reactions on YouTube channel (48%; n= 507) than Facebook pages (34.6%; n= 366) and Twitter account (17.4%; n= 184). These findings indicated that there was no positive relationship between a number of posts and reactions.

Table 4.5. Number of Reactions on Social Media Pages of Group B Cases

Case	Facebook pages		Twitter accounts		YouTube channels	
	Count	%	Count	%	Count	%
B ₁	0	0	0	0	0	0
B ₂			184	100	507	100
B ₃	306	83.6				
B ₄	60	16.4				
Total	366	100	184	100	507	100

Note. Blank means Not Applicable

Source: Fieldwork data, 2016

A further analysis was carried out to examine the relationship between a number of posts and reactions on social media pages of cases B_{3,4} (see Tables 4.6, 4.7 and 4.8). Reactions which were considered in the Spearman's Rho Rank Order Correlation test were comments, likes and shares for Facebook pages, post retweets, reply and reply retweets for Twitter accounts. Views and likes/ dislikes were for YouTube channels. Except for shares on Facebook pages, the test results indicated that there was a strong, positive relationship between a number of postings and reactions. The findings revealed that a number of postings influenced the rate of reactions. However, if the sample size of cases B were larger than this one, it would influence these results (Kent, 2001).

Table 4.6. Correlations between Posts and Reactions on Facebook Pages of Group B Cases

Variable	1	2	3	4
1. Total posts	-			
2. Total post likes	1.000**	-		
3. Total post shares	.866	.866	-	
4. Total post comments	1.000**	1.000**	.866	-

Note. ** $p < .01$, 2-tailed.

Source: Fieldwork data, 2016

Table 4.7. Correlations between Posts and Reactions on Twitter Accounts of Group B Cases

Variable	1	2	3	4
1. Tweets	-			
2. Retweets	1.000**	-		
3. Replies	1.000**	1.000**	-	
4. Reply retweets	1.000**	1.000**	1.000**	-

Note. ** $p < .01$, 2-tailed.

Source: Fieldwork data, 2016

Table 4.8 Correlations between Posts and Reactions on The YouTube Channel of Group B Cases

Variable	1	2	3
1. Video posts	-		
2. Views	1.000**	-	
3. Video likes/ dislikes	1.000**	1.000**	-

Note. ** $p < .01$, 2-tailed.

Source: Fieldwork data, 2016

The activeness of social media pages of cases B_{2,3,4} was also analysed on an hourly basis while that of pages of all cases in group B was on the daily, weekly and age basis. Only the top five posts on their first day were considered for the hourly analysis.

On an hourly basis, as Tables 4.9 and 4.10 show, the longest durations between posting, commenting and replying on the social media pages of cases B_{2,3,4} were more than sixty minutes. According to the measure, generally, the activeness on cases B_{2,3} pages was low, but some individual activities like commenting were active.

Table 4.9. Rate of Activeness of Hourly Interaction on Social Media Pages of Group B Cases

Case	Post	Post-1st comment-minutes	%	Grade
B ₂	1	39	65	Active
	2	167	278	Not active
B ₃	1	86	143	Not active
	2	102	170	Not active
	3	252	420	Not active
	4	37	61	Not active
	5	11	18	Most active
	6	20	33	More active
B ₄	1	102	170	Not active

Source: Fieldwork data, 2016

Table 4.10. Rate of Activeness of Hourly Interaction on Case B₃ Facebook Page

Post	Comment-comment – average minutes	%	Grade
1	181	301	Not active
2	8	13	Most active
3	126	210	Not active
4	108	180	Not active

Source: Fieldwork data, 2016

For thirty days, on average, the Facebook page of case B₃ was the most active (83.6%; n=306) while those of cases B₁ (0%; n=0) and B₄ (16.4%; n=60) were inactive. On Twitter and YouTube, only the account and channel of case B₂ was significantly active while that of case B₁ was completely inactive.

Network analysis was also carried out to examine the connectedness amongst cases and participants in groups B and D respectively because an e-interaction between cases B_{2,3,4} and participants in group D formed thirty-day networks. On a scale of zero to 100, the score depicted that the interaction on Facebook pages among these cases B_{2,3,4} and group D participants was minimal. On the Twitter

accounts, it was higher than that of Facebook pages, but it was still only around 30%.

On the weekly and age basis, the activeness was relative to pages of cases B_{1,3,4}. Concerning Facebook pages, based on likes, on the weekly and age basis, the pages of cases B_{3,4} were active while that of case B₁ was inactive. Amongst the active pages, that of case B₄ was more active on a weekly basis while that of case B₃ was more active on an age basis.

Furthermore, on Twitter accounts, based on followers, only the account of case B₂ was significantly on the weekly (91.8%; n=225) and the age basis (75.8%; n=1,239). The accounts of the other two cases, B_{1,3}, were inactive on the weekly and the annual basis.

According to a number of views on YouTube channels, the account of case B₂ was the most active on a weekly basis (76.7%; n=362) while it remained active on an annual basis (42%; n=2,987). The channel of case B₁ was not active on a weekly basis (23.3%; n=110), but it was more active based on its age (58%; n=4,124).

The explanation of the occurrence of these patterns is that the degree of reactions of participants in group D is dependent on the rate of postings of cases in group B. In other words, the more the postings on a regular basis on social media pages, the more the reactions on a consistent basis - and vice versa.

4.4 INTERACTION ON ONLINE PLATFORMS OF GROUP C CASES

Cases C_{1,2,3} posted a lot of news on their online interactive platforms like social media pages. In doing so, the public was given unsolicited policy-related interaction and consultation opportunities. As analysed on the social media pages of cases in group B, the analysis of the provision and utilisation of these opportunities was based on hourly, daily, weekly and annual basis.

For thirty days, relatively, activeness of pages of cases in group C in providing opportunities was as follows. Firstly, Facebook pages of cases C_{1,2,3} were active;

secondly, a Twitter account of case C₂ was more active while that of case C₁ was active. Lastly, in relation to YouTube channels, the channel of case C₁ was significantly active while that of another case C₂ was active. A comparison of interactive websites was not possible as only case C₂ has an active, interactive website, which had an average of 13 news posts in a day.

Based on themes, cases in group C posted news on four themes (see them in the analysis of cases in group B above). Some posts were chosen to illustrate the themes. For example, some of the posts which fell under the first theme are as follows:

"President Dr John Pombe Magufuli meets with his predecessor, Dr Jakaya Mrisho Kikwete." (Case C₁)

"President Dr John Pombe Magufuli appointed his predecessor, Dr Jakaya Mrisho Kikwete University of Dar es Salaam (UDSM) chancellor." (Case C₁)

"President Dr John Pombe Magufuli suspended National Identity Authority (NIDA) CEO." (Case C₁)

"National Environmental Management Council (NEMC) lawyer fired for attempting to prevent Reverend Lwakatare's mansion from being demolished." (Case C₂)

"Kishapu District Commissioner (DC) ordered Village Executive Officer (VEO) and Ward Executive Officer (WEO) to report to policemen who impregnated students." (Case C₁)

"Kigamboni bridge project completed by 99%." (Case C₄)

"President Dr Shein urged civil servants to work responsibly to enable development in the isles." (Case C₃)

Likewise, there were also news posts which were about the second theme. These included:

"Opposition Members of Parliament (MPs) walked out of the parliament chamber after claiming to be denied opportunities to speak." (Case C₁)

"Member of Parliament (MP) Lwakatare's aid rejected in Bukoba." (Case C₂)

"MP Tundu Lissu won general election results dispute case." (Case C₃)

"Morogoro council chairperson election reporting censored." (Case C₃)

For the third theme, some examples of news posts are:

"Mr Lowassa complains about scaring opposition followers." (Case C₁)

"Dr Shein still a legitimate President of Zanzibar." (Case C₁)

"Maalim Seif declares his position on Zanzibar conflict." (Case C₁)

"Maalim Seif speaks to journalists about the political situation in Zanzibar." (Case C₁)

"CCM MPs attend an orientation/ induction seminar." (Case C₂)

"CCM in Tabora refuted rumours on CCM MP six-month suspension." (Case C₃)

There were also news posts about the fourth theme as follows:

"Abdallah: I wake up from the rubble, I go to school." (Case C₁)

"President Dr John Pombe Magufuli with his wife wishes Cardinal Pengo quick recovery." (Case C₁)

"Tanzania Airport Authority CEO drowned while swimming." (Case C₁)

"Flooding due to heavy rains disrupted businesses in Arusha and Morogoro." (Case C₁)

"Shortage of Maths teachers leads to poor performance." (Case C₁)

"Bank customers security after withdrawing money is doubtful." (Case C₂)

"Bishop expelled for embezzlement." (Case C₂)

"300 died because of beliefs related to witchcraft." (Case C₂)

"Six people died in car accident in Morogoro." (Case C₃)

"Six-year-old girl drowned in rainwater." (Case C₃)

"Religious leaders advised rescue moral degradation in the society." (Case C₃)

Over eight weeks, except for cases C_{3,4}, they had 2,710 tweets on their Twitter accounts. Relative to one another, the Twitter account of cases C₂ was more active while that of case C₁ was active. The exceptionality of cases C_{3,4} was that case C₄ did not tweet for eight weeks while case C₃ did not have a Twitter account.

Similarly, for YouTube channels, the channel of case C₁ was more active than that of case C₂. The channel of case C₄ was not active.

Cases C_{1,2,4} made a total of 47,856 tweets since they opened their accounts. The account of case C₂ was most active while those of cases C_{1,4} were not active. However, the account of case C₂, which was the most active, was older than those of cases C_{1,4}.

Again, for YouTube channels, the channel of case C₁ was the most active while those of cases C_{2,4} were inactive. In terms of the age of channels, the channels of cases C_{1,2} were about four years old, while that of case C₄ had existed for one year. Though case C₄ is also the TV station, case C₁ likely posted more videos than the rest because it is the TV station. However, while cases C_{1,4} are TV stations, they are different in terms of ownership.

This analysis revealed that the most likely factors for providing topical information via social media pages are discretionary powers of cases in group C and the benefits of the practice. The benefits could be the increase in their visibility, which in turn can increase readers, listeners and viewers base, which again, in turn, attracts more commercial adverts. However, a further investigation can provide a more comprehensive explanation of these findings.

As with online platforms of group B cases, following the magnitude of reactions, most participants in group D (n=143,455) utilised interaction opportunities on Facebook pages of cases in group C. With the exception of a page of case C₄, many interactions on pages of cases C_{1,2,3} were the most active as their durations were less than sixteen minutes (see Tables 4.11).

Table 4.11. Durations between Postings and Comments, Comments, Comments and Replies, and Replies

Case	Not active		Active		More active		Most active	
	Count	%	Count	%	Count	%	Count	%
C ₁	0	0	4	57	1	9	17	40
C ₂	0	0	2	29	7	64	13	31
C ₃	4	100	1	14	3	27	12	29
Total	4	100	7	100	11	100	42	100

Source: Fieldwork data, 2016

For thirty days, most participants in group D (n=143,455) reacted to news posts of cases in group C. Relatively, the Facebook page of case C₂ was more active (57%; n= 196,357) than pages of cases C₁ (23%; n= 80,032) and C₃ (19%; n= 65,957). Case C₄ was inactive.

According to network density measure, the thirty-day networks which group C cases and group D participants formed were not highly connected. It appears that there were minimal connections amongst participants in group D.

For eight weeks, in terms of receiving 'likes' from people including participants in group D, a Facebook page of case C₂ was more active (64.5%; n=100,611) while those of cases C₁ (13.3%; n=20,692), C₃ (20.6%; n=32,113), C₄ (1.6%; n= 2,641) were inactive. Regarding YouTube channels, specifically views, the channel of case C₁ was the most active (86.6%; n=655,516) while those of cases C₂ (13.4%; n=101,709), C₄ (0.01%; n= 79) were not active.

Based on the age of the Facebook pages, specifically 'likes', cases C₁ (38.7%; n=488,331) and C₂ (38.8%; n=489,095) had active pages while those of cases C₃ (20.6%; n= 259,815), and C₄ (1.9%; n=23,300) were not active. However, the percentage points of the Facebook page of case C₃ were closer to the active category. In relation to the age of YouTube channels, specifically views, the

channel of case C₁ was the most active (90.2%; n= 8,426,496) while those of cases C₂ (9.8%; n=916,397) and C₄ (0.007%; n= 658) were not active.

As indicated in section 4.3 above, this situation explains that the rate of provision of e-interaction opportunities and the degree of their utilisation are interdependent. However, in this section, the correlation test was not performed because cases in group C and participants in group D were not randomly selected.

4.5 SUMMARY

This chapter has to a large extent answered research questions 1, 2, 3 and 4 using the data which were collected using quantitative and qualitative content analysis. However, a part of question two, which is about the utilisation of e-information opportunities, was not answered because it would be challenging to identify citizens who utilised such opportunities.

The findings indicated that e-participation enabling environment was conducive as the diffusion of ICT and the Internet was high by all stakeholders, including the government. For example, all cases in group A adopted websites, some adopted social media, and one accepted an e-poll. The reason for adopting the websites is the decision of the government to adopt them, while the reason for engaging features is the discretionary power of the case to decide. Most group D participants utilised unsolicited policy-related discussion opportunities on social media pages of cases in group C because of interdependence between a degree of postings and reactions.

Provision of e-information opportunities on websites of group A cases reached a middle point towards a full extent. However, there were variations across group A cases and information categories. There were also more opportunities on the websites than social media pages because the use of websites is obligatory while social media is optional. E-consultations opportunities on social media pages of

cases in group B were none, although there were limited interactions between them and participants in group D because of mutual interdependence. It might also be possible that during the fieldwork, there were no consultations. Furthermore, there was no feedback given to participants in group D about policy decisions reached, although the process might not have occurred in the near past.

5 ONLINE SELF-ADMINISTERED QUESTIONNAIRE SURVEY RESULTS

As discussed in the methodology chapter, the online self-administered questionnaire survey also generated data to answer research questions 1, 2, 3 and 4 (see Table 3.2, p. 74). The group label of participants will not be used in this chapter because other groups of data sources were not involved in the survey.

5.1 SAMPLE CHARACTERISATION

There were almost twice as many male participants (69%; $n=33$) as female (31%; $n=15$). Three participants were excluded from this analysis because they did not answer the question of gender. In terms of age, there were more participants aged between 48 and 57 years (31%; $n=16$), followed by participants aged between 28 and 37 (28%; $n=14$). Only one participant was aged below 28 years. The number of participants aged between 38 and 47 years was the same as that of those who fell in the age group above 57 years (20%; $n=10$).

Most participants were PhD holders (71%; $n=36$), about a quarter of them had Master's degree (26%; $n=13$), and a handful of them had a bachelor degree or advanced diploma. Most of them had an average monthly income above Tanzanian Shillings (TZS) 1,500,000 (78%; $n=40$) while a few of them received a mean monthly income below TZS 500,001 annually (6%; $n=3$) (see Table 5.1).

Table 5.1. Average Monthly Income of Participants in Tanzanian Shillings

Average monthly pay (TZS)	Count	%
Below 500,001	3	5.9
500,001-1,500,000	8	15.7
Above 1,500,000	40	78.4
<i>N</i>	51	100

Source: Fieldwork data, 2016

Most of the participants were married (78%; n=40), and a few of them were single (16%; n=8). Additionally, one participant, E, was a widow, one was separated, and one was cohabitating. As Table 5.2 indicates, the mean size of households was five members (M=5.16, SD=2.103), and scores were normally distributed as measures of central tendency were almost the same (Neuman, 2014). Furthermore, a margin of error was very minimal (+/-1). The normal P-P plot demonstrated their normal distribution (see Figure 5.1).

Table 5.2. Household Size of Participants

Measure	Statistic
Mean	5.16
Standard Deviation	2.103
Mode	5
Median	5.00
S.E.	.297
Variance	4.423
Range	9
Minimum	1
Maximum	10
<i>N</i>	50

Source: Fieldwork data, 2016

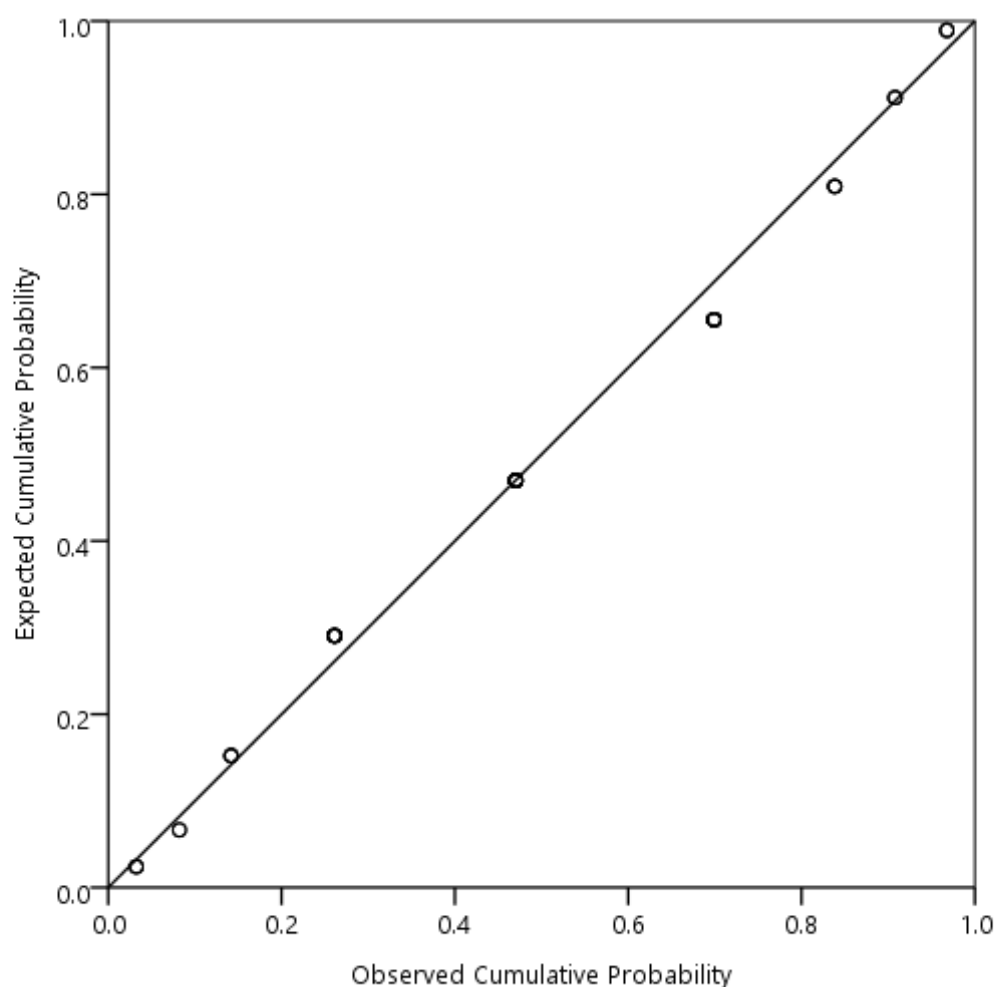


Figure 5.1. Normal P-P plot of the household size of participants. Source: Fieldwork data, 2016

In Tanzania, the government divides household headship according to gender, which is male and female (National Bureau of Statistics, 2011). The head of the household is a member of the household who is responsible for the affairs of household members, especially financial support and their welfare (National Bureau of Statistics, 2011).

Moreover, only human beings are classed as members of the household (National Bureau of Statistics, 2011). The results showed that a vast majority of households to which participants belonged were headed by men (92%; $n=47$). Additionally, there were no men who belonged to a female-headed household, but some women belonged to a household headed by women (100%; $N=4$).

The findings also indicated that more male headed households had married men (81%; n=38). Half of the women belonging to a female-headed household were separated (25%; n=1) or widowed (25%; n=1), and the other half were married (50%; n=2).

Additionally, only male headed households had a size of more than six members (100%; N=10). It was further revealed that more participants who earned more than TZS 500,000 belonged to medium (92%; n=21) and small (100%; N=17) households (see Table 5.3).

Table 5.3. Average Monthly Income in Tanzanian Shillings by Household Size of Participants

Average monthly income	Household size		
	Small (<=4)	Medium (5-6)	Large (7+)
Below 500,001	0%	8.7%	10%
500,001-1,500,000	11.8%	21.7	10%
Above 1,500,000	88.2%	69.6%	80%
<i>n</i>	17	23	10

Source: Fieldwork data, 2016

5.2 THE READINESS OF PARTICIPANTS FOR UTILISING E-PARTICIPATION OPPORTUNITIES

As the Internet enables the adoption of e-participation, participants' readiness to use it is critical for utilising e-participation opportunities. In the context of this research, e-participation readiness means someone possesses internet skills and performs online activities. The results showed that most participants (94%; n=47) used both traditional and modern communication channels to access information and news regularly.

It appears that a simple majority of participants (58.3%; n=28) preferred the internet to other communication media. They preferred it because it has more benefits than traditional communication media. For example, most participants (71%; n=34) found it less costly, more convenient (66%; n=31), effective (90%;

n=44), efficient (79%; n=37), interactive (77%; n=37) and as time passes by it becomes inexpensive (64%; n=31). Participants were equally divided on the view that the internet was readily available.

Following the advancement of ICT, Internet users can access the Internet from anywhere provided that there is connectivity. Most participants accessed the Internet from work settings (92%; n=46) and home (67%; n=32) regularly while a few of them did from an internet café (4.7%; n=2) and public libraries (4.7%; n=2), but less regularly.

Most participants had pages on more than one kind of social media, particularly Facebook, LinkedIn and Google+ while some of them had Twitter and YouTube accounts (see Table 5.4). These participants visited their pages at least once in a month, as Table 5.4 indicates.

Table 5.4. Sign-up and Frequency of Use of Social Media in a Month

Sign-up	Social Media					
	Facebook	YouTube	Twitter	LinkedIn	Instagram	Google+
Yes	72%	50%	57.1%	78%	39.5%	75%
No	28%	50%	42.9%	22%	60.5%	25%
<i>N</i>	47	42	42	44	38	44
Frequency of use						
None	2.9%	0%	19%	12.5%	7.1%	9.4%
Once	14.7%	23.8%	28.6%	15.6%	14.3%	12.5%
Twice	0%	4.8%	9.5%	18.8%	14.3%	3.1%
Three times	6%	4.8%	9.5%	9.4%	14.3%	15.6%
Four times	8.8%	4.8%	9.5%	3.1%	0%	6.3%
Five or more times	67.6%	61.9%	23.8%	40.6%	50%	53.1%
<i>N</i>	34	21	21	32	14	32

Source: Fieldwork data, 2016

Some participants also used JamiiForums while a handful of them used other forums such as MwanaHalisi and Tanzania Knowledge Network (TAKNET) (see Table 5.5). Jamii is a Kiswahili term for a community or society while MwanaHalisi

is also a Kiswahili phrase for a real child: Mwana is a child, and Halisi is real. A tiny proportion of participants joined Hi5 (4%; n=1), another minimal proportion of participants signed up on Muungwana (4%; n=1) and another small proportion registered on Tanzania Genome Network (4%; n=1). None of these participants reported the number of occasions on which they used such platforms in a week. Muungwana is a Kiswahili word for a gentleman or lady (Taasisi ya Taaluma za Kiswahili, 2014).

Table 5.5. Discussion Forums Membership and Frequency of Engagement in a Week

Sign-up	Forums			
	JamiiForums	MwanaHalisi Forums	CLKNET	TAKNET
Yes	49%	10.8%	8%	10.5%
No	51%	89.2%	92%	89.5%
<i>N</i>	47	37	38	38
Frequency of use				
None	10.5%	25%	0%	0%
Once	0%	0%	0%	50%
Twice	15.8%	0%	0%	25%
Three times	15.8%	0%	33%	0%
Four or more times	57.9%	75%	67%	25%
<i>N</i>	19	4	3	4

Note. CLKNET= Tanzania Country Level Knowledge Network

Source: Fieldwork data, 2016

It was revealed that participants used the internet to access information and news regularly, specifically they also used websites and social media pages of national media institutions like ITV Tanzania. Most of them (97%; n=34) read the news on the websites of those media institutions at least once in a week, while half of them (54%; n=19) did so more often.

Similarly, about half of them (46%; n=16) visited Facebook pages and did that at least once in a week. Moreover, close to two-thirds of these participants (63%;

n=10) did so four or more times in a week. Regarding YouTube channels, about a half of participants (41%; n=13) watched videos at least once in a week while nearly two-thirds of them (62%; n=8) did so three times or more in seven days. For Twitter accounts, one-quarter of participants (24%; n=7) read the news on those accounts at least once in a week.

On average, half of the participants (50%; n=32) accessed news on websites, Facebook pages and YouTube channels of traditional national media institutions combined. Nearly one-third of them (30%; n=7) read the news on both websites and Twitter accounts of those traditional national media outlets.

Apart from reading news, some participants also reacted to the news and posted their views. Only one-third of them (33%; n=15) commented on the news once in seven days while one-quarter (26%; n=11) shared the news with their networks once in a week. Likewise, one-third of these participants (37%; n=17) replied to the comments once in a week. A very small proportion of participants (4.3%; n=1) liked the postings three times every seven days. Some participants performed more than one activity; for example, the majority of those who commented on the news also replied to the comments of others (92%; n=12).

Traditional national media institutions conduct polls on a selected topic related to the news on a daily basis; for example, ITV Tanzania runs a poll called 'Kipimajoto.' 'Kipimajoto' - a Kiswahili term for a thermometer (Taasisi ya Taaluma za Kiswahili, 2014). However, a poll is not a social media; it is a tool which engages the public in a topic (Holzer & Kim, 2006, 2008; Holzer & Manoharan, 2016). The findings indicated that a few participants (14%; n=6) took part in polling once in seven days.

The findings indicated that participants were ready to utilise e-participation opportunities because they have adopted enabling Internet applications like social media. Moreover, they have used those applications to get news published

by traditional national media. However, their interaction on social media pages of national media outlets was not as high as that of getting news.

Moreover, as Table 5.6 depicts, on average, most participants recognised the benefits of adopting e-participation, mainly to improve the efficiency and effectiveness of public participation. However, it is surprising that only some participants recognised that e-participation enhances interaction and consultation. Furthermore, except for e-consultation, most participants had a favourable view that e-participation improves public participation.

Table 5.6. Perceptions of Participants of Relative Advantages of e-Participation in Tanzania

Response	View				
	More empowerment	More interaction/ consultation	More efficiency	More access/ use of information	More effectiveness
Strongly agree	50%	12.5%	43.8%	37.5%	31%
Agree	37.5%	37.5%	50%	50%	50%
Neither/ Nor	12.5%	25%	6.3%	12.5%	19%
Disagree	0%	25%	0%	0%	0%
Strongly disagree	0%	0%	0%	0%	0%
<i>N</i>	16	16	16	16	16

Source: Fieldwork data, 2016

5.3 THE UTILISATION OF E-INFORMATION OPPORTUNITIES ON GOVERNMENT WEBSITES AND SOCIAL MEDIA PAGES

Participants had a habit of accessing and using government information for working, studying, and other activities which are not related to work and studies. Most participants used such information for working (98%; n=42) and studying

(90%; n=34) while about a half of them (53%; n=16) used it for non-work and non-academic purposes.

They accessed government information through various means such as a website and visiting government buildings physically. On average, most participants (96%; n=36) used all categories of government information like policy and legislation annually. Based on individual categories of information and high frequency of use in 12 months, reports/ statistics ranked top (74%; n=31) followed by policy (68%; n=28). Government circulars (11%; n=1), newsletters (11%; n=1) and gazette (11%; n=1) ranked at the bottom although the participants used them four times annually.

The majority of participants (97.6%; n=41) used government websites at least once in a year. Most participants (71.4%; n=30) also used such websites more often in a year. Likewise, most participants (92.9%; n=39) used it via the government portal at least once annually, and a half of all participants (50%; n=21) did so more often in a year.

Nearly one-third of participants (31.6%; n=12) got information via social media pages of government ministries, and they did it at least once in a year. This rate of utilisation might be relative to the provision of such information on those social media pages. For example, the findings indicated that about half of participants (57%; n=8) witnessed the government publishing news more often in six months. A few (14%; n=2) found the government doing it three times in a half-year period while another few participants (14%; n=2) were not aware of it. Similarly, two-fifths of participants (40%; n=6) witnessed the government disseminating information via its social media pages in a six-month period. One-fifth of participants (20%; n=3) also witnessed the government doing it. In contrast, some participants (26%; n=4) did not witness that practice in that period.

Another means of obtaining information which many participants (76.9%; n=30) used was through visiting government offices physically. They paid visits to those government offices at least once in twelve months. Close to one-third of them (28.2%; n=11) went to the government offices to get information more often during a year.

Further analysis showed that participants combined these means of getting government information. For example, most of them (92%; n=36) combined ministries' websites and the government portal while one-third (32%; n=12) used ministries' websites and social media pages. On average, three-quarters of participants (76.5%; n= 28) used ministries' websites, the government portal and visited government offices physically to get information.

These instances of the utilisation of government information, means of getting such information and frequency of use indicated that the government provided e-information opportunities and participants utilised them annually. However, it appears that such online opportunities were not adequate because many participants continued to use a traditional approach. According to the analytical framework, the reason for such patterns is a degree of provision, and the rate of utilisation of such opportunities are dependent on each other.

5.4 PROVISION AND UTILISATION OF E-CONSULTATION OPPORTUNITIES

Apart from providing information opportunities, the government also used engaging online features like its social media pages to interact and consult with citizens. Some participants (50%; n=7) witnessed the government interacting with citizens at least two times in six months while other participants (43%; n=6) were not aware whether the government did that. One-third of participants (38%; n=5) also witnessed the government consulting with citizens at least once over six months, whereas two-thirds (61.5%; n=8) of them were not aware of this practice. These variations are associated with the freedom of government entities to

decide whether to use their social media pages to engage citizens in policy orientated decision processes.

As Table 5.7 indicates, in a week, most participants did not react to the postings of the government on its social media pages. For example, two-thirds of them did not comment on anything, three-quarters did not share anything with their networks, and two-thirds of them did not reply to the comments of other users.

Table 5.7. Frequency of Performing Activities on Government Social Media Pages in a Week

Frequency	Commenting	Sharing	Replying to a comment
None	66.7%	78.6%	69.2%
Once	6.7%	7.1%	15.4%
Twice	13.3%	7.1%	7.7%
Three times	0%	7.1%	7.7%
Four or more times	13.3%	0%	0%
<i>N</i>	15	14	13

Source: Fieldwork data, 2016

On the scale of zero to a hundred, all participants (n=17) who used government social media pages had a view that those pages were active (37%).

The factor which influences the limited participation of participants can be the view that social media are not compatible with government standard practice. For example, a simple majority of participants (58.8%; n=10) found them appropriate. One-third (35.3%; n=6) had a strongly positive view while a quarter (23.5%; n=5) did not have a strong view about that matter. Meanwhile about one-third of participants (29.4%; n=5) were undecided whether these applications are appropriate, and a handful of them (11.8%; n=2) found them inappropriate.

Most participants (78%; n=40) also never participated in any online government consultations or interactions before 01 October 2015. The limit was 01 October 2015 to avoid confusing participation in policy-making processes and voting in the general election which took place during that month (United Republic of

Tanzania, 2016c). Again, even the frequencies of those who participated in such an online decision-making process (22%; n=10) varied between less and more often during the period before October 2015.

Similarly, within three years before 01 October 2015, the government invited citizens to participate in decision-making processes through the Internet. However, it invited only a few participants (20%; n=10) at least once, but they did not take part in such decision-making processes.

Apart from social media, governments can use online decision-making tools like e-poll and e-survey to engage people in decision-making processes (Holzer & Kim, 2006; UN, 2014). Annually, most participants never participated in decision-making processes via e-poll (90.7%; n=39), e-survey (82.6%; n=38), e-petition (92.9%; n=39) and e-referendum (95.5%; n=42). On average, a very few participants (3.5%; n=2) participated in such decision-making processes using these features between once and more often in twelve months.

The motives of participants might also have influenced the utilisation of e-consultation opportunities. However, the same drives can apply for non-online policy-related decision-making exercises. The results showed that most participants utilised e-participation opportunities to improve the quality of policy decisions (see Table 5.8). Some did that to protect their interests. Most of them also believed that they were exercising their constitutional rights (see Table 5.8).

Table 5.8. Perceived Reasons for Taking Part in a Government – Citizens' Interaction and Consultation

Response	Opinion		
	Improving decision quality	Protecting interest	Exercising constitutional right
Strongly Agree	58.3%	16.7%	30%
Agree	41.7%	16.7%	50%
Neither/ nor	0%	25%	20%
Disagree	0%	25%	0%
Strongly Disagree	0%	16.7%	0%
<i>N</i>	12	12	10

Source: Fieldwork data, 2016

5.5 INFLUENCE OF AWARENESS ON THE UTILISATION OF E-PARTICIPATION OPPORTUNITIES

Awareness is one of the critical factors which influence the adoption of new practice (Rogers, 2003), in this case, e-participation. During three years before the fieldwork of this research, some participants were aware while others were not aware of the provision of e-participation opportunities – interactions or consultations. For example, close to half of the participants (45.8%; n=22) were informed by the government about such opportunities. About two-fifths of the participants (42%; n=21) were aware of such opportunities because they heard of other people taking part in public engagement. Furthermore, most participants (86%; n=19) were not only informed by the government about e-participation opportunities, but they also heard other people utilised such opportunities.

As Tables 5.9 shows, a relationship between awareness of the provision of e-participation opportunities and their utilisation was significant. Although such a relationship was significant, some participants (31.6%; n=12) were aware of e-participation opportunities, but they did not utilise them. Additionally, as Table

5.10 indicates, some participants (30%; n=12) also did not utilise e-participation opportunities, but they had heard that other people utilised such opportunities.

Table 5.9. Relationship between Participation and Awareness – Ever Heard from the Government

Have you ever heard from the government?	Have you participated in government? Interaction and consultation?	
	Yes	No
Yes	100%	31.6%
No	0%	68.4%
<i>n</i>	10	38

Fisher's Exact Test $P=.000$, two-tailed.

Source: Fieldwork data, 2016

Table 5.10. Relationship between Participation and Awareness – Ever Heard Others Participate

Ever heard others participate?	Have you participated in government interaction and consultation?	
	Yes	No
Yes	90%	30%
No	10%	70%
<i>n</i>	10	40

Fisher's Exact Test $P=.001$, two-tailed.

Source: Fieldwork data, 2016

As Table 5.11 indicates, one-fifth of participants were asked to utilise e-participation opportunities, but they did not respond positively. These participants, whose response was negative, were half of those who heard of such e-participation opportunities. This instance also revealed that there are other factors which influence the utilisation of e-participation opportunities, but they were not apparent through this method.

Table 5.11. Survey Participants Were Given E-Participation Opportunities but Did not Utilise Them

Frequency	%
None	79.6%
Once	4.1%
Twice	2%
Three times	6.1%
Four times	0%
Five or more times	8.2%
<i>N</i>	49

Source: Fieldwork data, 2016

5.6 REACTIONS OF THE GOVERNMENT TOWARDS ONLINE VIEWS OF CITIZENS

Participants had different opinions about the reactions of the government towards online views of citizens in policy orientated decision-making processes. In this case, the reaction comprises consideration of views, giving feedback and providing reasons for not considering such opinions. Of course, giving reasons for not considering the online views of people is part of giving feedback, but it expands on providing feedback.

One-third of participants (36.4%; n=4) believed that the government considered citizens' online views while about one-quarter of them (27.3%; n=3) did not believe this. On the one hand, a few of them held a strong belief; on the other hand, a handful of them strongly opposed that view. One-third of these participants (36.4%; n=4) also did not have a firm position on this aspect.

One-third of participants (30%; n=3) supported the view that the government provides feedback to people about their online views on policy decisions while two-fifths (40%; n=4) did not. One-fifth of those who opposed that view (20%; n=2) did so emphatically. There was also one-third of participants (30%; n=3) who were not sure whether the government reported to citizens about their contribution to policy decisions.

A simple majority of participants (58.3%; n=7) did not know whether one of the activities of the government on its social media pages was to give feedback. A very small proportion of participants (8%; n=1) did not observe that activity, but one-third of these participants (33.2%; n=4) witnessed the government giving feedback via their social media pages. The frequency of providing such feedback was not more than four times in six months.

Half of the participants (55.5%; n=5) did not believe that the government provides reasons for disregarding the online views of citizens. Most of the participants (80%; n=4) who disagreed did so strongly. About one-third of participants (30.3%; n=3) were also not sure whether the government gives reasons excluding citizens' online views from the policy decision-making processes.

These results revealed that the government ministries, departments and agencies were free to decide whether to consider the online views of people in policy-making processes. They were also free to decide whether to give feedback about citizens' online policy inputs. The indication of the discretion of these government entities is the different views of participants held about the reactions of the government towards people's online views during policy-related decision-making processes.

5.7 SUMMARY

The chapter answered research questions 1, 2, 3 and 4, but some answers were incomplete due to the limitations of the survey method.

The results showed that most participants used websites to get information and news. Furthermore, most of them adopted social media, but only a few used them to get news and to interact on social media pages of media institutions.

Participants also utilised e-information opportunities, but some of them continued to use traditional approaches such as visiting government offices

physically because some information was not online. More participants used other means of getting information than social media pages of the government for reasons which are unclear. However, the government published information and news on their social media pages occasionally because of their discretionary powers to do so.

Most participants did not utilise e-consultation opportunities possibly because they were not aware of the opportunities, although, as Diffusion of Innovation theory suggests (Rogers, 2003; Rogers & Shoemaker, 1971), awareness does not guarantee utilisation. Another reason for the limited utilisation of such opportunities could be a negative attitude of some participants towards that practice.

Some participants held the opinion that the government considered online views of people, gave feedback, including reasons for exclusion of such views while some did not hold such a view. The main reason for the varied views of participants is that the government units have the freedom to decide whether to consider online views and give feedback about policy decisions.

6 INTERVIEW RESULTS

As indicated in the methodology chapter (see Table 3.2, p. 74), semi-structured face-to-face interviews also generated data to answer questions 1, 2 and 4. The group label of interview participants will not be used in this chapter because other participant groups were not involved in this research method.

6.1 FEATURES OF PARTICIPANTS

As Table 6.1 shows, there were three women and five men. Until the time of the interview, they worked with the government for an average of 17 years. Six participants were aged between 35 and 49 years while the age of two participants, who were women, fell in the 50 to 59 group. The youngest participants were two men who fell in the 35 to 39 age group. The highest education level of all participants was a Master's degree.

The female participants served in the government for a more extended period than four of the men and the employment period of one man was as long as that of the women. The maximum number of years they had worked with the government was 30, and the minimum was 10. Until the date of the interviews, they held their positions for an average of 5 years. Three participants had four years, two had two years, and another three had worked for between five and ten years. Their mood and rapport during the interviews were generally good. However, before and at the beginning of the interview with participant 4, the participant was perceived to be in a bad mood, but as the interview progressed, this participant became cooperative and friendly. The reason for the change of the participant's mood could be that I managed to remain calm, respectful and focused on obtaining the richest data possible from the participant.

Table 6.1. Participants' Characteristics

Participant	Age	Gender	Highest formal education level	Years with government	Years in current position	Disguised government ministry
1	40-44	Male	Master's	10	4	F
2	35-39	Male	Master's	10	2	P
3	45-49	Male	Master's	23	10	O
4	40-44	Female	Master's	16	2	G
5	50-54	Female	Master's	25	5	E
6	45-49	Male	Master's	12	4	I
7	35-39	Male	Master's	10	4	M
8	55-59	Female	Master's	30	8	R

Source: Fieldwork data, 2016

According to Table 6.2, all participants accepted the web and email while except for participant 8, all of them adopted social media such as Facebook and WhatsApp. In other words, all participants have been familiar with modern ICT.

Table 6.2. Adoption of the Internet and Social Media by Participants

Modern media	Response	
	Yes	No
Blog	13%	87%
Email	100%	0%
Facebook	50%	50%
Instagram	13%	87%
JamiiForums	13%	87%
Telegram	13%	87%
Web	100%	0%
WhatsApp	50%	50%

Note. N=8

Source: Fieldwork data, 2016

Some participants highlighted different reasons for adopting social media, and various activities they performed on such media. For example, they did that for maintaining societal ties and socialisation, obtaining and sharing news and information. Participant 3 evaluated social media and selected Telegram because it has more benefits than other social media like WhatsApp.

"We use Telegram. There is something called Telegram, do you know Telegram? We rarely use Facebook; we use Telegram in a great deal. We have joined Telegram which enables a group to get a message – if I send you the message, all members receive it. The advantage of Telegram is that you can attach even a document. In contrast, on WhatsApp you cannot do that, what WhatsApp could only do is to allow photograph attachment, you can't attach a document which is in text format, you cannot attach it but on Telegram, you attach, on this one, someone can open, and read it." (Participant 3)

"I have an account with Facebook which now enables me to share not only personal family issues and other things of the sort ..., currently you find even Presidents including ours have Facebook accounts; for example, I have followed President Kenyatta, you read news about what he does socially and officially..., on Instagram, yes; for social life I am there." (Participant 2)

"I use social media, especially Facebook, but for personal affairs; it is basically for getting updates on my friends and communicating with them.

I also access educational materials, for example, information on democracy, health that has been linked to Facebook pages of other people such Ms Emmy Goodman page is on democracy. Reading newspapers or accessing current affairs such as what President Dr Magufuli has just done. It is helpful. I also access JamiiForums links.” (Participant 7)

Participants also had views on the suitability of social media use to provide e-participation opportunities. Most participants found them appropriate because they have reached a critical mass, they are viral, and some top government officials like a minister have personal social media pages. Despite being a personal page, one minister received policy-related feedback through it. However, these participants were cautious about using them without violating standard government practice because government officials may have low functional literacy, which might lead to breaching of the code of conduct. Some citizens may also misuse them and put government officials at risk of losing their jobs. Participant 4 made her position very clear that social media are suitable for internal use only.

“They are useful; for example, our minister has a Facebook page and shared with us inquiries he received from the public about [sector project name] fee structure. So, if our minister has the Facebook page and received views of the people instantly, the ministry could also open its page and engage the public because our minister already has an interest and he is using it.” (Participant 5)

“The way the situation is, some government information is sensitive, it is confidential and what have you. They could be appropriate for some issues, and inappropriate for other matters.” (Participant 3)

“They are good for internal communication; for example, there are groups of members of staff on WhatsApp who interact for work.” (Participant 4)

All participants have the experience of using the Internet, and only participant 8 did not have the experience of using social media. Those experiences are critical for the provision of e-participation opportunities because it shows their degree of readiness for adopting e-participation. The attitudes of some of the participants towards the official use of social media to engage citizens were

positive. However, apart from readiness, which is related to Internet skills, there are other factors which influence the provision of e-participation opportunities like government code of conduct.

6.2 RATE OF DIFFUSION OF THE INTERNET IN TANZANIA

Diffusion and adoption of the internet continue in Tanzania as participants witnessed that increasingly, many people, businesses and the government have been using the internet for various communication purposes.

There are various factors which influenced the diffusion and adoption of the Internet in Tanzania. Participants observed that higher speed of communication, more storage of information and accessibility, significant elimination of physical barriers and reduction of distance characterise the Internet. For example, people who have access to the internet can work from home. The internet has also reduced the bulkiness of information and cost of publishing information materials like budget books in print format.

"Now you can do a thing here; you are surprised to learn that it has been known where you couldn't think that it could be heard/ known, or something could happen elsewhere in the world, you know it immediately in Tanzania." (Participant 2)

"But the majority of the people want to see things online because there are people who are outside of the country they are studying and writing theses, they cannot travel back from the UK: those prefer to see things online." (Participant 2)

"It has been useful since most information is on websites, and most institutions have websites." (Participant 4)

"With the internet, information flow is very high and available; for example, education materials for studying are online, market information, information on political matters and economy are also on the internet." (Participant 6)

People, businesses and the government also adopted the internet to meet various needs like to improve their businesses and to increase development pace. Furthermore, people use the internet to follow online courses. Globalisation and

more use of the internet in offices have also contributed to the high penetration of the internet in Tanzania due to the reciprocity of interaction.

"The internet is in Tanzania and used mainly in offices." (Participant 8)

"But also, globalisation or global changes make(s) people use the internet more highly." (Participant 1)

The advancement of ICT has made the internet less complex to use. For example, wireless and modern technologies like mobile devices and convergence enable people to access the internet from everywhere and multiple devices. Additionally, the high penetration of mobile telephony has enabled the great use of the internet, mainly through smartphones.

"In 5 years or 6 years or 10 years ago, to access the internet, someone had to go to the internet café but with the time that continued but nowadays you can just access the internet on the phone." (Participant 2)

"Internet penetration is now high since even mobile phones are used in the rural place." (Participant 3)

"As the internet is also accessible through smartphones; for instance, if the area is covered with Wi-Fi, someone could make a call via the internet, but it is low or not happening in the rural area." (Participant 4)

"In the past, someone had to use a personal computer to access the internet, but nowadays it is accessible on mobile devices such as iPad and smartphones." (Participant 5)

Despite the high rate of diffusion and adoption of the internet in Tanzania, there is a digital divide. The factors which influenced such a divide were complexity, income level, accessibility and affordability of electricity and uneven development between urban and rural area. Most urban places are more developed than their rural counterparts. For some people, the Internet was complex as they did not have adequate digital and information literacy. Regarding electricity, in some areas including the rural areas is not widely accessible, and it is not reliable and affordable for many people both in an urban and rural place. On an individual basis, the internet was costly for people with low income.

"It is growing very fast, especially in cities compared to villages where its use is not much." (Participant 4)

"In the rural area, there is no wider internet network." (Participant 6)

"However, more people in urban areas visit it than their counterparts in the rural places." (Participant 8)

Based on the experience of other people who use them, Participant 8 believed that adoption of social media has an undesirable effect, which is addiction. For example, some users of social media lose their concentration in meetings because they continue using them.

"I have observed that those who use it do not concentrate in the meetings and training workshops because almost all the time they are chatting." (Participant 8)

These findings indicated that participants also knew the degree of diffusion and adoption of ICT and the Internet by citizens. This rate of adoption of ICT has the potential for adoption of e-participation because the practice depends on the Internet.

6.3 DIFFUSION AND ADOPTION OF ICT IN THE GOVERNMENT

The government also adopted ICT to enhance the administration and improve the delivery of services. It altered its structure and introduced new functions to facilitate the adoption of such technologies. At the national level, it established the executive agency called e-Government Agency (eGA) while at the ministry level, it formed departments of ICT and Government Communication Unit (GCU).

"It is high; its penetration is high, especially in the government as internet use has increased year by year. Currently, I think the government is in the process of implementing e-government; they call it e-government in the sense that most communication will be through the internet." (Participant 3)

"All officers here at the ministry have workstations that are connected to the internet via local area network (LAN) and wireless. We are permitted to use the internet for both work and personal matters like accessing private emails, but according to job rules and regulations or ethics, we are

primarily required to use the internet for work-related businesses.”
(Participant 7)

The functions of the established government entities are as follows. eGA oversees, supervises, and guides the use of ICT and the internet in the government. It also approves proposals of the use of ICT and the internet, including social media, which are submitted by other government agencies.

“eGA provides guidelines on how to use e-government, including social media.” (Participant 4)

“e-government has been introduced, and there is an e-government agency to take care of that.” (Participant 5)

ICT departments were also added to the structure of government ministries to promote ICT use like government email addresses. The departments also monitor the usage of government ministries websites and link the government ministries with eGA.

“... We have an IT department here, and these are their ambassadors, they link with them very quickly. Also, we do some things which they mainly supervise/ oversee. So as an agency of the government we need to get guidance from them, we work very closely with them. An example of working with eGA is that we try hard to let our [sector facilities] to offer services electronically, ..., they need to provide guidance; we want all our [sector facilities] to have electronic systems, so those are custodians, ...”
(Participant 2)

The government also promoted the use of its email addresses because they secured the email server and formulated a policy of official email communication. Before the new policy of official email communication, some government officials used third-party email servers like Gmail and Yahoo, but it was contrary to government communication standards.

“For example, in the past, the government did not allow the use of e-mails for official communication, for instance, my former boss who retired recently did not accept any official letter sent via email, but nowadays email is one of official communication means, and my current boss cherishes it.” (Participant 5)

"Before we were using private emails such as Gmail, Yahoo for official communication, but now we are using government emails using our mailing system." (Participant 8)

GCU was also established in all government ministries to improve communication between the government and the public.

"Yes, we use social media channels, which are Twitter, and Facebook but Government Communication and ICT units are using them. GCU does communication via these platforms on behalf of the ministry." (Participant 4)

All participants used ICT, including the internet and emails, to fulfil their work duties effectively and efficiently. For example, they use official emails to share minutes of previous meetings before their meetings and draft reports for comments. They too use the emails to give work-related feedback to one another when one is not physically in the office.

"For example, now our ministry implements a programme that at least every member of staff should have a government email address. Now some ministries are successful, and others are not, so this indicates that internet use has increased especially in government offices." (Participant 3)

"For example, s/he has been making work-related follow-ups electronically, and I respond via my smartphone even when I am at home; ... e-government has been introduced, and there is an e-government agency to take care of that." Participant 5)

In addition to the diffusion of ICT and the Internet across participants and other citizens, the government enabled the ICT environment, which could suit the provision of e-participation opportunities. The government has ensured that the ICT infrastructure is stable as it institutionalised the ICT technical support.

6.4 E-INFORMATION OPPORTUNITIES PROVISION

As part of ICT adoption in the government, government ministries of participants adopted websites for various communication needs. All government ministries of participants use their websites to provide information to their stakeholders

such as citizens. Some categories of information are Acts, budget guidelines and speeches, policy, and programme.

“You find all key documents such as vision, mission, strategic plan, policies such as [sub-sector names] policies, minister’s speeches, passed a budget. There are also vacancies and training opportunities announced by Public Service Management like scholarships.” (Participant 7)

The accounts of different participants revealed a variation across information categories. There are various reasons for this difference across government ministries and information categories. Firstly, government ministries have discretionary power to decide on a category of information to disseminate. For example, the government ministry of participant 3 decided not to publish Acts on their website because they could be available on the website of the ministry responsible for legal matters. They did not do that because the Acts of their sector were on Bunge website, too.

“I have never seen Acts because I think Acts is under the mandate of another ministry, so possibly Acts could not be on our website as such. However, Acts are available at the Ministry of Constitutional and Legal Affairs or Parliament. On the parliament website, you will find all Acts including that of the ministries and the like; so even that of [sector name] are available there. Possibly Acts might not be available here as such since the responsible ministry makes them available or stocks them. On our website, there are documents which are only more relevant to [sector name] matters.” (Participant 3)

Secondly, the structure of the government also contributed to such variations as one government ministry is coordinating functions of other ministries.

“We have only one policy, and we do not have Acts because we just coordinate [sector functions] which are highly related to other ministries such as trade, so Acts are available on websites of those ministries.” (Participant 6)

Government ministries of participants 1,2,4,5,7 and 8 use their websites to publish their news and opportunities like scholarships and jobs. Some examples of the news are disease outbreak, contract signing events and launching of completed projects.

"Such information is about [sector functions] agreements which are signed by the ministry of [sector name] on behalf of the nation, function structure of the ministry and its responsibilities." (Participant 1)

"almost all government ministries now have official websites which offer information to the public such as job opportunities." (Participant 7)

"It is easier to inform the public about the completion of projects, and orders given by high authorities." (Participant 8)

Adequacy and currency of information on government websites are also essential for the public to meet their information needs regularly. The findings indicated that all government ministries of participants strived to provide enough information to the public.

All participants believed that their government ministries provided enough information which is necessary for the needs of government stakeholders like citizens and Development Partners.

"To a large extent, it is sufficient. A citizen needs to know, for example, now we have something called 'facility registry', it is a portal when you open it, it will show Handeni, centres we have there, the location of a centre, and Global Positioning System (GPS) has been used to establish it." (Participant 2)

"We provide important information which the public need, viz. the relevant one, and we are trying our best to do it." (Participant 4)

However, participants 1,2,3,6, and 7 doubted whether the information on their government ministries websites was adequate because some people still inquired about some information. Moreover, the information may not be enough because the government does not publish all information to safeguard information and national security. Additionally, the government ministry of participant 3 did not upload their circulars on their website because they overlooked that, but the reason for this could be a lack of professionalism.

"Regarding adequacy, it is somewhat a problem because you may find there are some complaints. Probably, we have not yet made some items available on the website. Either we delay uploading them on the internet, or we do not make them available at all. For example, there are [sector

name] circulars, which are very important; now I see people are looking for them while they are not yet uploaded. All of them are not available online.” (Participant 3)

“It could not be enough to the extent we anticipate for the society, probably they need so much information which likely we have not made available to them via the internet.” (Participant 3)

“It is not possible to put up all information on the website, and people still inquire about information.” (Participant 6)

The government ministry of participant 8 ensured that the information on their website was always up-to-date.

“Our website has timely information since our GCU collaborates with ICT unit constantly to update it.” (Participant 8)

Government ministries of participants 1,2, and 5 promoted the information which is on their websites using interpersonal and mass media to enhance the utilisation of such e-information opportunities. For example, the government ministry of participant 5 used TV to inform the public about the availability of budget speeches on their website during the live televised parliamentary budget sessions. Another example is that the government ministry of participant 1 included their website address in their print publications, which were disseminated during a ‘Nane Nane’ day and public service management week. The ‘Nane Nane’ day is Peasants Day, which takes place on the 8th of August every year. ‘Nane Nane’ is a Kiswahili phrase for “8th August.”

“Nowadays I do not see anybody coming into my office looking for the copy of policy because we have already told them that policy is available online, so most people know where to find documents of the ministry.” (Participant 2)

“As a strategy to inform the public in general and Members of Parliament in particular, when a minister reads the budget in the national assembly before he submits it he announces that a soft copy of that budget speech is on the website of the ministry.” (Participant 5)

“We are promoting the website in most ministry documents which we disseminate: we are saying that there is a website of the ministry of [sector

name] and mention it so that those who have needs could access it.”
(Participant 1)

Government ministries not only provided e-information opportunities via their websites, but they also promoted them because they have more advantages than non-online dissemination channels. For example, participants 1, and 5 reported that through their websites, communication and sharing of information became faster and more comfortable than traditional media. Additionally, the opportunities for promoting government ministries increased.

“To inform the public efficiently and effectively and provide accurate information instantly. For example, news on the opening of [sector business] on 19 April 2016 communicated very quickly via our website.”
(Participant 5)

Despite the promotion of information which is on government websites, some citizens were not aware of such opportunities.

“You may find that there are many documents on the website, but someone comes to the ministry and makes inquiries, ‘can I get a certain document?’ while it is on the internet.” (Participant 3)

Membership of the Open Government Partnership (OGP) forum required Tanzania to provide more e-information opportunities to become more transparent.

Tanzania is a member of one forum known as OGP; we joined some few years back, something like three or four years back, which requires transparency. The website is one of the means that show transparency – to show what the government is doing, what is the ministry is doing.”
(Participant 2)

However, it appears that Tanzania made clear its position on transparency regardless of the membership requirements and determined to stick to that position. It seems that Tanzania informed the group of a possibility of not meeting some membership requirements in favour of the norms, including national privacy. For example, they state clearly that they would not free up data on the Internet because of possible negative consequences.

"Even when we joined OGP, we said we would be transparent; we could give all sorts of information except those which would tamper with our national security." (Participant 2)

"People may not be delighted with the information we provide, but there should be a limit; transparency does not mean that 'you strip off all your clothes, you stand before/ in front of people.'" (Participant 2)

"We avoid providing raw data; our system of providing information are not yet ingenious to the level of 100% of accuracy. So, if you provide information which is not processed, it is the raw data, it can lead to a small challenge; for example, we have collected information from the facilities on HIV prevalence rate which shows a situation in Dar es Salaam, you realize that when posting on the system, someone entered 50 instead of 5. So, it showed that a 50% prevalence rate of HIV is in DSM; the next day you will find people are at the airport, especially these foreigners, they are boarding planes leaving the country. ... the public has been demanding for raw data, but since our systems are not smart/ perfect/ effective, we cannot release raw data, we are still insisting on providing secondary data in order to give the right information which cannot lead to any confusion." (Participant 2)

This instance indicates that the innovation, which is a membership requirement of the network compels its members to adopt that innovation if they want to maintain their membership. As the analytical framework does not capture this phenomenon, in the context of this research, I call it a supercharger network effect as opposed to the turbocharger network effect. This effect is analogous to a device of an internal combustion engine whose purpose is to increase power and fuel efficiency. As the device is connected to the engine directly, the supercharger operates optimally at all speeds (Ferguson & Kirkpatrick, 2015, pp. 150-158).

Some government ministries adopted social media as well, which are Blog, Facebook and Twitter. They adopted such media to supplement their websites to publish news, disseminate information and collect feedback.

"It is a trend, now many people like to read what is on Facebook, so if you post something on the website, not all people can open the website and search." (Participant 2)

“Since more people use social media – Facebook and Twitter, the ministry decided to use them to provide information and news which are also on our website to a wider audience more easily and promptly.” (Participant 8)

“If someone has comments, s/he could use social media instead of coming to the ministry physically and dropping them in our suggestion box located inside the ministry building.” (Participant 7)

Government ministries perceived social media to have three benefits - that they have high-speed information flow, are easier to use, and are more interactive than a website. The critical mass of some social media like Facebook and Twitter contributed to the adoption of such platforms. Critical mass is the point at which enough members of the social system, say Tanzania have adopted an innovation such that a further rate of adoption becomes self-sustaining (Rogers, 2003, p. 500).

“If I decide here, let me write anything, it will spread contrary to something I would post on the website of the government; that means, that is the genuine information and the thing that comes from the authority.” (Participant 2)

Despite the relative advantages of social media, other government ministries did not have social media pages because the guidance on the use of government social media pages was in process. It is the government policy that every technology and practice must have government guidance before they are in use. The government ministries avoided the risk of violating government values like information and national security because a website and social media are different. The government ministries which have social media pages used them based on the guidance on the use of government websites. That is why they only used them to supplement their websites.

“It does not have a Facebook page, nor a Twitter account, and neither YouTube channel. We have not reached that stage mainly because the ministry of [sector name] is the government entity, and the government must have guidelines to be close to the public. That is, if it is communication, it will be being done this way, but now there are no guidelines. That is the thing that has made the ministry not to have

WhatsApp, Facebook page, and the like to use them to provide information to the public.” (Participant 1)

All these results indicated that government ministries of these participants provided e-information opportunities, but the provision did not reach the highest level. The factors for this situation are benefits of the practice, the effect of OGP membership requirements, the performance of public servants, and needs, values and standard practice of the government.

6.5 E-INFORMATION OPPORTUNITIES UTILISATION

According to the experience of participants, people have utilised government information which is in online and print format. Further analysis indicated that as time passes by, increasingly more people, including MPs, access information online. Some participants used the number of downloads and drop in demand for physical publications to measure a rate of utilisation of e-information opportunities. However, downloads are not very accurate for measuring the information downloaded by Tanzanians because this requires registration (Schmidt & Cohen, 2013). The reasons for the increase of utilisation of such opportunities were more provision of the opportunities and their promotion and benefits of the practice.

“People prefer to use items which are available on the website or online, you send me a soft copy, no longer prefer hard copies. So, a few people come here, in the past people came to my office, “please give me a copy of a policy”; I dished out copies of the policy until they were out of stock but since 2007. Nowadays I don’t see anybody coming in my office looking for the copy of policy because we have already told them that policy is available online.” (Participant 2)

“That trend of coming, physically looking for information is decreasing; the situation is not like in the past, it is true; I see since 2005, for example, nowadays people are not very many. Currently, when you tell someone it is available on the website, those who come to collect information physically are not many.” (Participant 3)

“Number of requests of copies of printed policy is falling; so, the use of soft copies is increasing; and we refer people to our website to obtain the

information they need. For example, we normally print 1000 copies of budget speeches and distribute all of them to people including MPs, but this year we still have a lot of remaining copies; and we have received fewer inquiries about a budget speech.” (Participant 5)

“Generally, over time, physical policy document requests have dropped because it is available on the internet.” (Participant 6)

“MPs nowadays use iPad which are attached to their desks to access government information during Bunge sessions.” (Participant 7)

“ICT unit has reported that website statistics show that downloads increase as time passes by.” (Participant 8)

However, despite the increase of utilisation of e-information opportunities, some people still prefer print to online information. Attitude towards the authenticity of e-information, awareness, demographic features, digital divide and literacy influenced the use of online information. For example, some people perceive online information as not authentic, while others are not aware of its availability on government websites and social media pages. Some demographic features like income, age and education level also contributed to the preference of print to online information. For example, young people use online information, while older people use print material. It is also possible that some people used a physical approach because some publications like circulars were not available online.

“They still choose information in print format even though they are told that it is accessible online. Some people are aware, but they find that physical visit like queueing or physical information, that is, information which is in print format as genuine or credible.” (Participant 5)

“Some people do not have access to the internet, and some of them are not aware of online provision of government information.” (Participant 5)

“There is still a challenge of a digital divide, especially between rural and urban places since in the rural area, there is no wider internet network.” (Participant 6)

“Old generation still choose hard copies. Less educated people also prefer print.” (Participant 7)

People may have different preferences of information format because the internet is more accessible in the urban area than a rural place. Additionally, some people do not have adequate information literacy, such as online searching and navigation skills.

“Someone can’t even access a document, saying, ‘how can I get it there?’ I will tell him/ her that if you go at the top there, there is a menu tab labelled ‘documents’ then open there. So, it may be because of the ignorance of how to use it, the digital literacy rate is a bit low.” (Participant 3)

Because of challenges such as the digital divide, the government ministry of participant 4 likely decided to provide information on both formats proactively. However, their decision was in line with the government norm of providing information online.

“The ministry prefers to disseminate government information in both formats – internet and print. On the side of citizens, ordinary people prefer hard copies to soft copies while internet users prefer e-copies.” (Participant 4)

The analysis indicated that people utilised e-information opportunities, but some of them continued to prefer the traditional approach to getting information. The factors for these patterns are the advantages and awareness of the practice, digital and information literacy, and digital divide. The mutual interdependence between the provision and utilisation of such opportunities and qualities of citizens like their education and income level also influenced the pattern of utilisation of the opportunities.

6.6 E-CONSULTATION OPPORTUNITIES PROVISION AND UTILISATION

Government ministries have provided policy-related consultation opportunities to citizens using physical and online approaches. The physical means are letter writing, meetings, seminars, working sessions, and questionnaire completion to involve people who do not have access to the Internet.

"Now we think of using the internet; in the meantime, we want to conduct different surveys physically in order to involve participants who do not have internet access." (Participant 1)

"We used meetings; that is, we wrote stakeholders invitation letters and had meetings with them." (Participant 5)

"Generally, physical public participation is preferable to online one." (Participant 6)

"The common means of engaging stakeholders is a questionnaire, and even in the coming review questionnaire will be used." (Participant 8)

"We have been using physical means only such as working sessions, and seminars when we reviewed and formulated policies." (Participant 8)

Digitally, only three government ministries have been using email and an online submission form, which was a webpage of their websites.

"We asked them to send us their views via email and physically." (Participant 4)

"We also opened a page to collect views via the internet, views about this new policy. It was a sort of an online form, online form." (Participant 3)

"Online submission form was used through [sector agency] website." (Participant 7)

The analysis indicated that government ministries had given more physical consultation opportunities than digital ones. For example, only two government ministries used online submission form while one government ministry used their email. The use of email to engage citizens in policy-related decisions is a surprise because in this research definitions of e-participation and the Internet excludes email.

Government ministries which have social media pages did not use them to engage people in policy discussion because the government social media pages use guidelines were in process. Though it was not policy-related consultation opportunity per se, one government ministry used their Facebook page to collect views about terms of reference of environmental impact assessment. However, it

seems they used it to supplement their website to reach more people as the terms of reference were also on their website.

"When we reach those points, we have different ways of collecting views. Of which, you can write on social media, you write a topic. However, to be frank currently, we have not yet done so, but we are about to review the policy, and that is one of the methodologies that we might use." (Participant 2)

"I am not sure whether social media platforms were used since GCU does communication via these platforms on behalf of the ministry." (Participant 4)

"Our blog is a read-only platform, so people cannot comment on the news we post on it." (Participant 6)

"Policy reviews are also conducted online; for example, we put up on the website terms of reference for Environment Impact Assessment of the [sector name] development project. We also posted those terms of reference on ministry Facebook page. However, a policy-orientated engagement that originates from DPP's office like views on terms of reference for [sector name] development project which we solicited from people via Facebook is rare." (Participant 7)

During policy orientated decision-making processes, none of the government ministries ever used decision-making tools like e-petition to collect the views of the people. Surprisingly, even the government ministry which adopted an e-poll never used it for that purpose. The reasons for not using them are as follows. First, some government officials were not aware of whether they could use such tools to engage citizens in policy-related decision-making processes. Second, some government officials perceived that such tools did not match government needs to involve people in policy consultations. Last, the decision to use such tools was not yet made, and it rests on eGA on behalf of the government.

"To be honest, we don't practice online petition; We have never used online petition here." (Participant 3)

"I am not sure whether we have ever used these means. I would like to refer you to our GCU for further information on this matter." (Participant 4)

"Sincerely, I have not seen polling on our website." (Participant 7)

"We have never used them, and I am not sure if they could be appropriate. I think we should try and see their effects. I will suggest this to the management." (Participant 8)

"Within the government, some officials are aware of collecting views of people via the internet and others are not. It is still a new way of engaging citizens." (Participant 8)

A few people utilised those few e-consultation opportunities because there was a lack of awareness and the practice was complex because of the tool they used. As revealed in the utilisation of e-information opportunities, the digital divide also influenced the utilisation of these opportunities.

"We created the page so that they could write their views there, then we see the content here, to correspond. It was a sort of an online form, online form but their response was not very good probably because of ignorance, that is, possibly people fail to access, how to use it, you know that how to use it also influences a rate of response." (Participant 3)

"Very few people could participate online because few people could access the internet, especially those who live in the urban area." (Participant 6)

"Policy reviews are also conducted online; for example, we put up on the website terms of reference for Environment Impact Assessment of the [sector name] development project, but we received comments mostly from NGOs that deal with environmental issues, and not from individual citizens. We also posted those terms of reference on ministry Facebook page and received comments from few individuals." (Participant 7)

"Awareness of citizens of online public participation is low because more people in the urban place are more likely to be aware of this than those in the rural area where the internet service is almost not there; however, more people in urban places are not well informed about this way of engagement." (Participant 8)

The analysis also indicated that government ministries received more views through physical than online approaches because it was their established practice to use interpersonal communication channels to invite them. The direct invitation could provide an incentive to the invited people, which is recognition.

"We had a lot of views which were obtained through other means such as meetings and letter writing apart from online form." (Participant 3)

"We used meetings; that is, we wrote stakeholders invitation letters and had meetings with them, and their turn out had been very high."
(Participant 5)

These results suggest that fewer e-consultation opportunities and their utilisation were lower than e-information findings because of limited awareness, inadequate required skills, digital divide, and preference of direct government-citizen communication. The mismatch between government values and needs and the practice also influenced that pattern. However, the digital rift could not have much effect on e-consultation because e-information was higher than e-consultation while the same gap size has existed.

6.7 CONSIDERATION OF ONLINE VIEWS OF PEOPLE IN POLICY DECISION-MAKING PROCESSES

As the purpose of collecting views of people is to improve the quality of policy, the two government ministries which collected online views considered them in policy orientated decision-making processes. However, some opinions were excluded in the processes because they were not relevant as some citizens did not have enough technical knowledge about the sector.

"Their views were very highly considered, and in most cases, as you know most stakeholders who provide their views on technical matters don't understand well how [sector name] business works or conducted because they are not experts. So not all views they give could be considered in the policy review because not all views are relevant for reviewing policy, but some of them are relevant for any other documents related to say strategies. So, they are considered but in the relevant area." (Participant 3)

However, one may argue that even the views which the government obtain via the physical approaches can be irrelevant and ignored.

The negative attitude of some government officials towards e-decision-making and probably e-consultation influenced the utilisation of online views regardless of their relevance. Their attitudes are linked to the optional innovation-decision.

"Some government officials still regard online views as not good ones."
(Participant 5)

These findings indicated that e-decision-making was still lower than the adoption of e-information. The inclusion of online views in decision-making processes depended on the attitude of government officials towards the practice and the quality of such opinions.

6.8 SUMMARY

This chapter includes answers to questions 1, 2 and 4 obtained through face to face semi-structured interview.

The analysis indicated that the adoption of the Internet by the government, officials and citizens was high. For example, all government ministries have websites. E-information opportunities and their utilisation were high, but some information was not on government websites. E-consultation opportunities provision and their utilisation, and consideration of online views of citizens were low.

The results suggested different factors for the patterns of adoption of the Internet and e-participation. The advantages of the medium and practice influenced the adoption of internet and e-information. Affordability is associated with the utilisation of e-information opportunities and adoption of the internet among citizens. Discretionary decisions of government ministries are related to the provision of e-information and e-consultation opportunities, and consideration of online views of citizens. The centralised decision also influenced the provision of e-consultation opportunities. Awareness of the practice is connected with the provision and utilisation of e-consultation opportunities and adoption of social media. Government bureaucracy and centralisation of powers to eGA to decide on e-technologies and e-practice adoption influenced the provision of e-consultation opportunities.

The digital gap also influenced the utilisation of e-information and e-consultation opportunities and adoption of the internet among people. Government values

and needs influenced the provision and utilisation of e-information and e-consultation opportunities. The mutual interaction between the government and citizens, and direct invitation to participate are related to the utilisation of e-consultation opportunities. Performance of public servants and e-participation as a membership requirement influenced the provision of e-information opportunities. The establishment of eGA, ICT and GCU are associated with the provision of e-participation opportunities.

7 DISCUSSION

This chapter presents comprehensive findings and a connection between the findings of this study and those of the previous research on the adoption of e-participation. The implications for theory and practice will also be covered.

7.1 COMPREHENSIVE E-PARTICIPATION FINDINGS

The analysis indicated that to a significant extent, the findings of three research methods converged.

7.1.1 Adoption of ICT by cases

The characterisation of samples showed that there was a great deal of adoption of social media which were used for various communication purposes like getting information. However, the survey findings indicated that interaction on discussion platforms was limited. The exception was discussion forums. The survey and interview findings suggest that benefits of social media influenced their adoption while the content analysis results did not suggest any particular reason.

Content analysis and interview results also indicated that the adoption of websites reached a saturation point while the adoption of engaging tools like e-poll and social media was limited. The evidence from both methods suggests that eGA's decision to adopt websites influenced the high adoption of websites. A free choice of government units whether to adopt social media and e-decision-making tools also led to the limited adoption of such tools. The interviews results indicated that the benefits of websites, social media and e-decision-making features, public service guidelines and ethics, and different functions of government entities influenced the adoption of the Internet.

These results suggest that there was a conducive environment to provide and utilise e-information opportunities rather than e-consultation and consideration of online views.

7.1.2 E-information opportunities provision and utilisation

The answers to research questions 1 and 2, which were obtained through all three research methods, shed light on adoption of e-participation in Tanzania. In relation to question 1, the findings of content analysis and interviews indicated that there were many e-information opportunities on websites, but some e-information opportunities like availability of circulars were missing.

Moreover, the provision of such opportunities varied across cases in group A and information categories. The findings through these research methods suggested that a free choice to adopt or reject e-information influenced a degree of adoption of that practice. The interviews' results also indicated that the key factors in provision of e-information opportunities are arrangement and functions of government entities, values, needs and past experience of the government. Other factors in such provision are guidance and public service management ethics, the benefits and awareness of the practice. The practice as a network membership requirement, expertise and professionalism of public servants are contributing factors in provision of e-information opportunities.

Regarding question 2, the results suggest that e-information opportunities are not fully utilised because the traditional approach to get information still dominates. The results of both the survey and interviews indicated that the rate of utilisation is dependent on the degree of provision of the opportunities. The interview analysis provided more factors which are awareness of the availability of the opportunities, the benefits and credibility of the practice, digital divide, and affordability of Internet access.

Responses to questions 1 and 2, content analysis and survey findings further indicated few e-information opportunities on government social media pages because the units have freedom to adopt or reject the practice. The content analysis and survey findings indicated that the rate of utilisation of these e-

information opportunities was low. According to the content analysis results, the degree of utilisation of such opportunities is dependent on the rate of provision.

7.1.3 E-interaction and e-consultation opportunities provision and utilisation and e-views consideration

The three research methods generated answers to research questions 1, 2, 3 and 4. In relation to questions 1, 2 and 3, content analysis and survey findings showed that the interactions on the social media pages of group B cases were somewhat active. In contrast, the interactions on pages of group C cases were more active. The reason for these patterns is that the government grants discretionary powers to its units to decide whether to provide such opportunities. The content analysis results add another factor in the degree of utilisation of such opportunities is the rate of their provision.

Relating to question 1 again, the content analysis and interviews indicated that there were no consultation opportunities on official social media pages. However, the results of the survey on the utilisation of e-consultation opportunities indicated that there were opportunities, but they were very few. According to the findings of the interviews, the government guidelines and public service management ethics influence the provision of those opportunities. Another reason is that various government entities are free to decide whether to provide such opportunities. The survey results indicated that the factor for that situation is that some citizens perceive social media not to be credible for engaging people in policy engagement.

Again, on question 2, the survey and interviews results indicated that a degree of utilisation of e-consultations which were provided through the websites and emails, were very few. The interview findings suggested that awareness of opportunities, internet literacy, digital divide, government guidance and ethics, and an invitation to individual citizens to participate influence the utilisation of those opportunities.

The answer to question 4 through the survey and interviews indicated that not all online views of people were considered in policy-related decision-making processes because of optional innovation-decision. The interview findings also suggested that some online views of people were excluded because they were not relevant as some citizens have limited expertise in the sector and policymaking. The content analysis results indicated that feedback and reasons for exclusion for some views were not given. However, the survey results showed that sometimes the feedback was given, but reasons for excluding some views were not communicated to the public.

7.2 CONTRIBUTION TO BODY OF KNOWLEDGE ON ADOPTION OF E-PARTICIPATION

The findings of this research were compared with the results of Astrom et al. (2012), Kneuer and Harnisch (2016), UN (2016, 2018c) because they were involved in the debate and included Tanzania in their populations.

The findings of this research on e-information opportunities provision were consistent with the results of UN (2016, 2018c). This study and UN's surveys indicated that the government provided many opportunities, but some e-information opportunities were missing. However, based on the findings of the content analysis, the score of Tanzania on e-information provision was lower than that of UN (2016) by 11 percentage points. This comparison is critical because the difference between the time of collecting data for this study and that of UN (2016) was small. The fieldwork of UN (2016) was undertaken in 2015, while this research took place in 2016.

This research also measured the utilisation of e-information opportunities while UN (2016, 2018c) used the provision to represent the utilisation. According to the findings of this investigation, the utilisation was as high as the provision of such opportunities. These findings suggest that the proxy for e-information opportunities utilisation was reliable, but its reliability would not be evident if usage were excluded from the measurement.

The findings of this research and UN (2016, 2018c) on the adoption of e-consultation opportunities were inconsistent. This study found that a degree of e-consultation adoption was low while UN (2016, 2018c) indicated that it was high. The findings of this research suggest that the availability of e-consultation features on government websites was not an accurate proxy for the adoption of the practice. For example, this research found that the purpose of government social media pages is to supplement their websites to disseminate news and information rather than to consult with citizens.

The results of this research and UN (2016, 2018c) on the adoption of e-decision-making were similar because they indicated that the adoption was low. As in the findings on the adoption of e-information, it appears that the proxy for e-decision-making was reliable, but its accuracy requires an investigation of usage.

This research and studies of Astrom et al. (2012), Kneuer and Harnisch (2016) and UN (2016, 2018c) provide factors which influenced the patterns of adoption of e-participation in Tanzania. UN (2016, 2018c) and this study discovered that awareness of the practice, matching of the nation's values and needs, internet skills, and digital divide are associated with the adoption of e-participation. This research and that of Astrom et al. (2012) and Kneuer and Harnisch (2016) indicated that the benefits of the practice influence the adoption of the practice. However, Astrom et al. (2012) argue that for non-democracies, the advantage of deploying e-participation features is economic growth rather than democracy. This study and that of Kneuer and Harnisch also found that membership of nations like the United Nations and OGP influence the adoption of e-participation. However, this research specified that e-participation as a membership requirement quickens the adoption or rejection of this practice.

UN (2016, 2018c) also revealed other factors of adoption of e-participation, which were not discovered in this research. UN indicated that persuasion, an income of the nation, and committed political leadership contribute to adopting this

practice. Likewise, this study showed that discretionary and central decisions, the arrangement of government units and their mandates, mutual interdependence between the government and citizens influence the adoption of e-participation. Other factors are demographic features of citizens such as education, recognition as a result of direct invitation to participate in policy and different expertise of citizens in different fields.

This discussion suggests that measuring usage in e-participation research provides more comprehensive knowledge about its adoption in practice. It also confirms that utilisation of e-participation opportunities is not a latent variable of the provision of such opportunities because it can be measured directly. The detailed analytical framework, research methods, and different data sources of this research enriched the investigation of this phenomenon.

7.3 IMPLICATIONS FOR THEORY AND PRACTICE

This research improves the Diffusion of Innovation theory validity and suggests improvements to the practice of e-participation in Tanzania.

7.3.1 Implication for theory

The analysis of this study supports most assumptions of Diffusion of Innovations theory. For example, the results indicated that the discretionary decision of government ministries influenced the rate of adoption of e-participation. This explanation was organised based on the proposition that innovation-decisions influence the rate of adoption of the innovation.

However, the theory could not explain the instance of the membership requirement, which is an innovation, which also influenced the speed of adoption of the innovation. As mentioned in the analysis, as a contribution to knowledge, I name such an instance as the supercharger network effect. The supercharger network effect can also explain the adoption of innovation, which is a requirement for membership of a network of individual people.

Since this research brings the supercharger network effect to the field, it would be useful to undertake further research to test the validity of the finding.

7.3.2 Implication for practice

The analysis also suggests some improvements in the practice of the government to speed up the adoption of e-participation. The areas for enhancement are awareness of the practice among citizens and government officials, mutual interaction between the government and citizen, and discretionary and centralised decisions.

As the analysis indicated that the promotion of e-information opportunities increased the utilisation of such opportunities, government ministries should increase efforts to make as many people as possible aware of such opportunities. The government should also publicise the opportunities of e-consultation and e-decision-making. It should also provide adequate e-participation opportunities because the degree of utilisation depends on the rate of provision of such opportunities.

The results indicated that discretionary decisions affect the provision of e-participation opportunities. The proposition is that the government should minimise the possibility of making such decisions to improve the provision of e-participation opportunities. For example, according to the guidelines of government websites, the publication page is a must, but the information categories are optional (United Republic of Tanzania, 2014c, p. 12). This is something which affects the provision of e-information opportunities. If the critical policy-related documents must be on that page, not only will more e-information opportunities be provided, but to some extent, they will also be given evenly.

7.4 SUMMARY

The data which were generated using all three research methods contributed to more understanding of the factors that influence e-participation adoption in

Tanzania. For example, e-information opportunities provision and utilisation were high, but some e-information opportunities were not available, and some citizens did not utilise the available e-information opportunities. The reasons for that pattern are discretionary decisions and a mutual interaction between the government and citizens. In contrast, e-consultations and considerations of online views were limited due to discretionary decisions of the government and government communication guidance and code of conduct.

The findings filled the gap of this research and fit in the existing body of knowledge of e-participation adoption. The results also informed the theory and practice.

8 CONCLUSIONS

The debate on e-participation adoption across the UN member states raised a question regarding whether the factors influencing the adoption of that practice in Tanzania were well-understood because of the measurement approach. On the one hand, the UN argues that the deployment of e-participation tools and the availability of information on government websites and social media pages indicate the adoption of e-participation (UN, 2003, 2004, 2005, 2008, 2010, 2012, 2014, 2016, 2018c). However, the UN surveys excluded the usage of the deployed e-participation features and information on government websites and social media pages (UN, 2014, 2016, 2018c). On the other hand, Astrom et al. (2012) and Kneuer and Harnisch (2016) argue that the UN has not studied online public participation because the scope of UN surveys has left out the top-down, bottom-up relationship between the government and citizens.

There were no other studies with the focus on Tanzania, which examined the factors of the adoption of e-participation. Astrom et al. (2012) and Kneuer and Harnisch (2016) used UN e-participation data. Therefore, Astrom et al., Kneuer and Harnisch, and UN (2003, 2004, 2005, 2008, 2010, 2012, 2014, 2016, 2018) explain the adoption of the e-participation environment rather than a practice as the proxy is not always accurate as this research and Marriott (2013), Plowman (2016) and Wittrock et al. (2017) indicate.

Following that discussion and the research problem, this study examines the factors, which are associated with the adoption of e-participation in Tanzania. Rogers' theory of Diffusion of Innovation guides the analysis of data. According to the conceptual framework of this research, e-participation is a top-down, bottom-up government-citizen relationship. The mixed-methods approach was employed to enhance the understanding of the adoption of e-participation in Tanzania. The research methods were online self-administered survey, web

content analysis and face-to-face semi-structured interviews. The research comprised populations of cases in groups A, B, C, D, E, and F.

The answers to question 3 suggest that some groups, D and E, were ready to utilise e-participation because they were taking part in unsolicited online public debates. The answers to questions 1, 2 and 4 indicated that the provision and utilisation of e-information opportunities were higher than that of e-consultation and consideration of online views of citizens. However, the adoption of e-information did not reach the full extent, as there were still information inquiries. The answers to questions 2 and 4 showed that e-consultation opportunities provision and utilisation and consideration of online views of people were equally low.

Again, the answers to research questions 1, 2, 3 and 4 showed an array of factors which influenced the magnitude and patterns of adoption of e-participation. The factors are awareness of the practice, values and needs of the government, internet and information skills, digital divide, and benefits of the practice. Other factors are demographic features of citizens, government communication guidelines and code of conduct, mutual interaction between the government and citizens, a practice as one of the membership requirements, and recognition. The performance of government officials, functions of government units like government ministries, bureaucracy, freedom and centralised decision-making powers influence the adoption of the practice.

This research contributes to the existing knowledge about this topic as it provides clarity and more factors of adoption of e-participation in Tanzania. For instance, a degree of adoption of e-consultation in Tanzania is not high as reported in the UN's surveys. This investigation suggests the factors in adoption of e-participation in Tanzania, which the UN studies do not. The factors are recognition of citizens in participation through personal invitation, expertise of citizens, level of individual income, age of citizens, and education level of citizens.

Other factors are the performance level of public servants in the departments of policy and planning, government communication guidelines and ethics, and discretion of government ministries to adopt e-participation. Government decisions that require every unit of the government to adopt an innovation, functions of different government entities, and bureaucracy also contributes into adoption or rejection of e-participation. Other factors are a presence of a decision unit which decides for the government on adoption of ICT-related innovations, and an innovation as a membership requirement. The interdependence between provision and utilisation of e-participation opportunities is also a factor in adoption of e-participation.

This research also improves a theoretical explanation about a relationship between a network effect when a membership requirement is an innovation. It suggests the concept for such a phenomenon to be the supercharger network effect.

This study is the snapshot of the adoption of e-participation in Tanzania, and it is not generalisable. The main reasons for this assertion are that not only that the sample of academics and researchers was small, but it was also a small segment of the diverse general population. Moreover, the population size of participants in group D was not established, and their sample was not randomly selected. Additionally, the margins of error of the samples of government ministries were too wide to make any generalisations to the entire population of government ministries. Lastly, the fieldwork of this study was conducted within ten months after the 2015 general elections, which might influence the behaviour of participants in groups D, E and F.

As this research provides an understanding of the adoption of e-participation in Tanzania in 2016, further investigation of this topic is required. I suggest another study like this one when government guidelines for the use of government social media pages are ready and used for more than a year. Similarly, I propose further

research on the impact of Tanzania's withdrawal from the OGP on e-participation in Tanzania.

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APPENDICES

APPENDIX 1. A SURVEY QUESTIONNAIRE IN A TABULAR FORMAT IN WORD

Definition of terms	Options/ Values	Definition of concepts	Scale	Rationale			Remarks
				Objectives	Methods (descriptive analysis)	Methods (possible statistical tests)	
Question 1: Having read and comprehended the information above, do you accept to take this survey?							On BOS: Multiple choice question (single answer)
	<ul style="list-style-type: none">• Yes• No		Categorical	To sign an informed consent	NA	NA	If No, routed to screen out a message

Definition of terms	Options/ Values	Definition of concepts	Scale	Rationale			Remarks
				Objectives	Methods (descriptive analysis)	Methods (possible statistical tests)	
Media use and preference							
Question 2: In the past three (3) months, have you used at least one of the following information media: Radio (offline), TV (offline), Newspapers (offline), the public Internet such as the web, WhatsApp, and SMS information services; for example, Tigo services; Airtel services information services?							On BOS: Multiple choice question
Media means a form of carrying messages	<ul style="list-style-type: none">• Yes• No	The Internet means the web and its application. SIM Application	Categorical	To show a degree of use of modern and traditional media	Frequency and percentage – order magnitude, comparison.	Identify its relationship and its level of significance with other variables esp.	If No, routed to q7

Definition of terms	Options/ Values	Definition of concepts	Scale	Rationale			Remarks
				Objectives	Methods (descriptive analysis)	Methods (possible statistical tests)	
		s/ SMS information services, e.g. Vodacom Flava, Tigo services, Airtel Services-info services, i.e. texting a number to				demographics, i.e. conducting a chi-square test	

Definition of terms	Options/ Values	Definition of concepts	Scale	Rationale			Remarks
				Objectives	Methods (descriptive analysis)	Methods (possible statistical tests)	
		retrieve information, e.g. #15467 for news					
Question 3: How frequently do you access or use information media of your choice in a week?							On BOS: Scale/ Rank question
	<ul style="list-style-type: none"> Radio [not online], TV [not online], 	SMS information services,	Ordinal/ interval scale using	To reveal media preference	Frequency and percentag	Identify relationship and its level	

Definition of terms	Options/ Values	Definition of concepts	Scale	Rationale			Remarks
				Objectives	Methods (descriptive analysis)	Methods (possible statistical tests)	
	<ul style="list-style-type: none"> Newspapers [not online] The Internet/ the web WhatsApp SIM Applications/ SMS info services e.g. Vodacom Flava 	e.g. Vodacom Flava, Tigo services, Airtel Services- info services, i.e. texting a number to retrieve information , e.g.	Likert scale [Never Once Twice Three times More than three times]	[magnitude of use in comparison]	e of choice, i.e. to see the magnitude of use of the Internet compared to other media	of significance with other variables – chi-square test/ spearman's rho	

Definition of terms	Options/ Values	Definition of concepts	Scale	Rationale			Remarks
				Objectives	Methods (descriptive analysis)	Methods (possible statistical tests)	
		#15467 for news N.B.: Not personal SMS					
Question 4: Following some of your responses to question 3, select the information media you have used in the order of preference from the highest to the lowest? One being the highest and six the lowest? [if yes in Q 2 above]							On BOS: Scale/ Rank question

Definition of terms	Options/ Values	Definition of concepts	Scale	Rationale			Remarks
				Objectives	Methods (descriptive analysis)	Methods (possible statistical tests)	
Preference means ranking media when it comes to access the same information	<ul style="list-style-type: none"> • Radio [not online], • TV [not online], • Newspapers [not online] • The Internet/ the web • WhatsApp • SIM Applications/ SMS info services 	SMS information services, e.g. Vodacom Flava, Tigo services, Airtel Services- info services, i.e. texting a number to	Ordinal scale [1= being the highest and 6=the lowest]	To show media preference [position of the Internet regarding ranking]	Frequency and percentage, i.e. to identify mostly preferred in ascending order – 1=high & 6=low	Identify its level of significance of the relationship with other variables – chi-square test	

Definition of terms	Options/ Values	Definition of concepts	Scale	Rationale			Remarks
				Objectives	Methods (descriptive analysis)	Methods (possible statistical tests)	
		retrieve information , e.g. #15467 for news N.B.: Not personal SMS					
Question 5: How many times in a week do you access the Internet from the listed points below?							On BOS: Scale/

Definition of terms	Options/ Values	Definition of concepts	Scale	Rationale			Remarks
				Objectives	Methods (descriptive analysis)	Methods (possible statistical tests)	
							Rank question
In this context, the Internet means publicly accessible world Wide web (www) and its applications such as social media (Sloane, 2005).	Home Work/ school/ college/ university Internet café Public library/ information centre/ telecentre		Ordinal scale, i.e. Likert scale: None Once Twice Three or higher times	To identify places of access and more frequent access points [proxy to internet subscription in turn proxy	Counts and percentages	Identify relationship and its level of significance with other variables, i.e. conducting chi-square or	

Definition of terms	Options/ Values	Definition of concepts	Scale	Rationale			Remarks
				Objectives	Methods (descriptive analysis)	Methods (possible statistical tests)	
Access point means a physical place where the Internet (i.e. websites and social media) is accessible either for fee or free.				to media preference]		Spearman's rho tests	
Question 6: How much do you agree or disagree with the following statements about the Internet (for example, e-mail, file transfer, newsgroups, website, social media) compared to other communication media?							On BOS: Scale/

Definition of terms	Options/ Values	Definition of concepts	Scale	Rationale			Remarks
				Objectives	Methods (descriptive analysis)	Methods (possible statistical tests)	
							Rank question
	It is less expensive than other media It is less convenient than other media It is more effective than other media It is less efficient than other media It is more interactive than other media		Ordinal scale, i.e. Likert scale: Strongly agree Agree Neither/ Nor Disagree	To identify the perception of citizens of the Internet and link it to their media preference.	Frequency and percentages, i.e. inclination of their perceptions about the Internet.	Identify relationship and its level of significance with other variables using chi-square test/spearman's rho.	

Definition of terms	Options/ Values	Definition of concepts	Scale	Rationale			Remarks
				Objectives	Methods (descriptive analysis)	Methods (possible statistical tests)	
	It is not more readily available than other media It is becoming less expensive than other media		Strongly disagree				
Social media use							
Question 7: Do you have accounts on any of the following social media channels? ([Performing most activities on social media, e.g. YouTube, Facebook, Twitter required login/ sign in]; {alternatively E-mail is required to comment on YouTube}; (few activities like 'share' do not require login)).							On BOS: Grid question (merged)

Definition of terms	Options/ Values	Definition of concepts	Scale	Rationale			Remarks
				Objectives	Methods (descriptive analysis)	Methods (possible statistical tests)	
Social media means simple, easy and less expensive web services to maintain and develop ties, and to publish and access information (Murthy, 2013).	Facebook YouTube Twitter LinkedIn Instagram Google+ Other (please specify)		Categorical scale, i.e. Yes/ No (Forced choice)	To show a proportion of citizens with an awareness of social media and using them to signify a positive attitude towards the Internet and online	Counts and percentage	Identify relationship with other variables.	

Definition of terms	Options/ Values	Definition of concepts	Scale	Rationale			Remarks
				Objectives	Methods (descriptive analysis)	Methods (possible statistical tests)	
				interaction, i.e. to relate this to media preference [proxy to preference]			
Question 7a: Choose a number of times of use of your choice in a month (i.e. the one with 'Yes' selection)							On BOS: Grid question (merged)
	Facebook YouTube		Ordinal scale, i.e.	To shed light on the rate of	Counts and	Relationship and its	

Definition of terms	Options/ Values	Definition of concepts	Scale	Rationale			Remarks
				Objectives	Methods (descriptive analysis)	Methods (possible statistical tests)	
	Twitter LinkedIn Instagram Google+ Other (please specify)		Likert scale: None Once Twice Three times Four times More than four times	use of social media [proxy to media preference]	percentages	significance with other variables	
Question 8: To which of the following online discussion forums do you belong?							On BOS: Grid

Definition of terms	Options/ Values	Definition of concepts	Scale	Rationale			Remarks
				Objectives	Methods (descriptive analysis)	Methods (possible statistical tests)	
							question (merged)
Online discussion forum means online platform on which people discuss various topics by posting their views and starting topics	JamiiForums, MwanaHalisi forums, Tanzania Country Level Knowledge Network (CLKNET), Tanzania Knowledge Network (TAKNET), Other (please specify)		Categorical scale, i.e. Yes/ No	To show a level of awareness of popular discussion forums; and (awareness again of) engagement in online discussions			

Definition of terms	Options/ Values	Definition of concepts	Scale	Rationale			Remarks
				Objectives	Methods (descriptive analysis)	Methods (possible statistical tests)	
				[proxy to media preference]			
Question 8a: Please provide a frequency of engagement in your choice in a week (i.e. the one with 'Yes' selection).							On BOS: Grid question (merged)
	JamiiForums, MwanaHalisi forums, Tanzania Country Level Knowledge Network (CLKNET),		Ordinal scale, i.e. Likert scale: None	To reveal a degree of engagement in online forums, i.e.	Counts and percentages	Relationship and its significance with other variables –	

Definition of terms	Options/ Values	Definition of concepts	Scale	Rationale			Remarks
				Objectives	Methods (descriptive analysis)	Methods (possible statistical tests)	
	Tanzania Knowledge Network (TAKNET), Other (please specify)		Once Twice Three times More than three times	positive attitude towards online discussions [proxy to media preference]		chi-square and/ or Spearman's rho	
Online news access and interaction: a case of news access							
Question 9: Which of the following online channels of national media institutions (for example, ITV, TBC1, Mwananchi Tanzania) do you access news?							On BOS: Grid

Definition of terms	Options/ Values	Definition of concepts	Scale	Rationale			Remarks
				Objectives	Methods (descriptive analysis)	Methods (possible statistical tests)	
							question (merged)
	Website, Facebook, YouTube, Twitter, Other (please specify)		Categorical scale, i.e. Yes/ No	To identify a rate of use of the web and social media with a focus on news access, i.e. comparing this rate with that of the government	Counts and percentages	Relationship and its significance with other variables – chi-square test.	

Definition of terms	Options/ Values	Definition of concepts	Scale	Rationale			Remarks
				Objectives	Methods (descriptive analysis)	Methods (possible statistical tests)	
				website and social media [proxy to media preference and online interaction]			
Question 9a: Please provide a frequency of use of your choice in a week (i.e. the one with 'Yes' selection)							On BOS: Grid question (merged)

Definition of terms	Options/ Values	Definition of concepts	Scale	Rationale			Remarks
				Objectives	Methods (descriptive analysis)	Methods (possible statistical tests)	
	Website, Facebook, YouTube, Twitter, Other (please specify)		Ordinal scale: None Once Twice Three times More than three times	To show a frequency of access to show that they are used to it [proxy to media preference and online interaction]	Counts and percentages	Relationship and its significance with other variables – chi-square/ spearman's rho	

Definition of terms	Options/ Values	Definition of concepts	Scale	Rationale			Remarks
				Objectives	Methods (descriptive analysis)	Methods (possible statistical tests)	
Question 10: On a weekly basis, how frequently do you perform the following activities on online platforms (websites, social media such as a Facebook page) of national media outlets (for example, ITV Tanzania, StarTV, TBC1, and Mwananchi Tanzania)?							On BOS: scale/ rank question
	Comment on news Share news including re-tweet (for Twitter) Reply to a comment of others Poll (for example, 'Kipimajoto on ITV Tanzania) Other (please specify)		Ordinal scale: None Once Twice Three times More than three times	To identify a level of their participation (actual use) which will be compared with that of the government	Counts and percentages	Relationship and its significance with other variables – chi-square/ spearman's rho	

Definition of terms	Options/ Values	Definition of concepts	Scale	Rationale			Remarks
				Objectives	Methods (descriptive analysis)	Methods (possible statistical tests)	
				[proxy to online interaction]			
e-Participation awareness – e-consultation							
Question 11: How many times in the past three (3) years have you experienced the following scenarios?							On BOS: scale/rank question
online government consultation/	Ever heard of online government consultation and/ or		Ordinal scale: None	To illustrate a level of awareness	Counts and	Relationship and its significance	

Definition of terms	Options/ Values	Definition of concepts	Scale	Rationale			Remarks
				Objectives	Methods (descriptive analysis)	Methods (possible statistical tests)	
interaction Consultation: is a constant practice of government seeking for opinion or views from citizens on policy orientated matters before making	interaction before this survey, Ever heard others participate in online government consultation and/ or interaction, Ever been invited to take part in online government consultation and/ or interaction but did not participate		Once Twice Three times Four times More than four times	and a rate of citizens participation in decision-making processes	percentages	with other variables – chi-square/ spearman's rho	

Definition of terms	Options/ Values	Definition of concepts	Scale	Rationale			Remarks
				Objectives	Methods (descriptive analysis)	Methods (possible statistical tests)	
decisions and giving feedback on decisions made via government websites (e.g. feedback form), and its social media pages on time. Interaction: is a constant practice of							

Definition of terms	Options/ Values	Definition of concepts	Scale	Rationale			Remarks
				Objectives	Methods (descriptive analysis)	Methods (possible statistical tests)	
exchange of views and information between government and citizens on policy orientated issues such as citizens comment on service delivery via government							

Definition of terms	Options/ Values	Definition of concepts	Scale	Rationale			Remarks
				Objectives	Methods (descriptive analysis)	Methods (possible statistical tests)	
websites (e.g. online feedback form) and its social media pages, and the government reacts to them on time via the same media.							
Participating in the public decision-making process							

Definition of terms	Options/ Values	Definition of concepts	Scale	Rationale			Remarks
				Objectives	Methods (descriptive analysis)	Methods (possible statistical tests)	
Question 12: Have you ever participated in online government consultation and/ or interaction before 01 October 2015?							On BOS: Multiple choice (single answer) question
Consultation: is a constant practice of government seeking for opinion or views from			Categorical scale: Yes No				If No selected, jump to q14

Definition of terms	Options/ Values	Definition of concepts	Scale	Rationale			Remarks
				Objectives	Methods (descriptive analysis)	Methods (possible statistical tests)	
citizens on policy orientated matters before making decisions and giving feedback on decisions made via government websites (e.g. feedback form), and its social							

Definition of terms	Options/ Values	Definition of concepts	Scale	Rationale			Remarks
				Objectives	Methods (descriptive analysis)	Methods (possible statistical tests)	
media pages on time. Interaction: is a constant practice of exchange of views and information between government and citizens on policy orientated							

Definition of terms	Options/ Values	Definition of concepts	Scale	Rationale			Remarks
				Objectives	Methods (descriptive analysis)	Methods (possible statistical tests)	
issues such as citizens comment on service delivery via government websites (e.g. online feedback form) and its social media pages, and the government reacts to them							

Definition of terms	Options/ Values	Definition of concepts	Scale	Rationale			Remarks
				Objectives	Methods (descriptive analysis)	Methods (possible statistical tests)	
on time via the same media.							
Question 12a: If you selected 'Yes', roughly how many times have you participated before 01 October 2015?							On BOS: (merged with 12); multiple choice (single answer) question
Policy means a tentative			Ordinal scale:	To find out if the	Counts and	Relationship and its	

Definition of terms	Options/ Values	Definition of concepts	Scale	Rationale			Remarks
				Objectives	Methods (descriptive analysis)	Methods (possible statistical tests)	
course of action to a problem in a particular sector in a given society; i.e. probable solution to a problem, that is, hypothesis (if-then/ what-why) (Hyder, 1984; Lewis,			once, twice, three times, four times, more than four times	government uses online decision-making tools, and citizens use them to air their views, and after that to compare with UN e-participation survey	percentage	significance with other variables – chi-square	

Definition of terms	Options/ Values	Definition of concepts	Scale	Rationale			Remarks
				Objectives	Methods (descriptive analysis)	Methods (possible statistical tests)	
1984; Marczyk et al., 2005; Sumerson, 2014)				findings related to online decision-making tools.			
Question 13: If you ever participated in online government consultation and/ or interaction, how much would you agree or disagree with the following statements about public decision making?							On BOS: scale/ Rank question
	I participate to share my views,		Ordinal scale:				

Definition of terms	Options/ Values	Definition of concepts	Scale	Rationale			Remarks
				Objectives	Methods (descriptive analysis)	Methods (possible statistical tests)	
	<p>I take part to improve the quality of policy or decisions,</p> <p>I participate to protect my interest,</p> <p>I engage myself in the decision-making process to exercise my constitutional right,</p> <p>The government does not consider my views in making decisions,</p>		<p>Strongly agree</p> <p>Agree</p> <p>Neither/ Nor</p> <p>Disagree</p> <p>Strongly disagree</p>				

Definition of terms	Options/ Values	Definition of concepts	Scale	Rationale			Remarks
				Objectives	Methods (descriptive analysis)	Methods (possible statistical tests)	
	The government provides me with feedback on whether or not my online views have been considered, The government gives me major reasons for not considering my online views						
Access to government information							
Question 14: Do you access or use government information (for example, policy, Act, and statistics/ reports)?							On BOS: Multiple

Definition of terms	Options/ Values	Definition of concepts	Scale	Rationale			Remarks
				Objectives	Methods (descriptive analysis)	Methods (possible statistical tests)	
							choices (single answer) question)
			Categorical scale: Yes No	To show a degree of use of government information regardless of means of access	Frequency and proportion	Relationship and its significance with other variables – chi-square/ spearman’s rho	If No selected, jump to q 18

Definition of terms	Options/ Values	Definition of concepts	Scale	Rationale			Remarks
				Objectives	Methods (descriptive analysis)	Methods (possible statistical tests)	
Question 15: How frequently do you use the following government information in a year?							On BOS: scale/ Rank question
	Policy Legislation e.g. Act Plan/strategy/programme/ project Budget/ finances Reports/ statistics Other (please specify)		Ordinal scale: None Once Twice Three times Four times				

Definition of terms	Options/ Values	Definition of concepts	Scale	Rationale			Remarks
				Objectives	Methods (descriptive analysis)	Methods (possible statistical tests)	
			More than four times				
Question 16: How many times in a year do you use the following means to access government information (e.g. Policy, Act, Statistics, Reports, and the like)?							On BOS: Scale/ Rank question
	Government ministry website, Government portal (www.tanzania.go.tz),		Ordinal scale: None Once Twice	To reveal a magnitude of use of online access to government information	Counts and percentages	Relationship and its significance with other variables – chi-square/	

Definition of terms	Options/ Values	Definition of concepts	Scale	Rationale			Remarks
				Objectives	Methods (descriptive analysis)	Methods (possible statistical tests)	
	Government ministry social media pages (e.g. Facebook, Twitter page), Government office (physical building), Other (please specify)		Three times Four times More than four times			spearman's rho	
Question 17: What are your principal reasons for using government information (e.g. Policy, Act, Statistics, Reports, and the like)? Please select an appropriate answer for you against each option given below.							On BOS: Grid question

Definition of terms	Options/ Values	Definition of concepts	Scale	Rationale			Remarks
				Objectives	Methods (descriptive analysis)	Methods (possible statistical tests)	
	Work, Education (schooling/ studying), Non-work/ non-education		Categorical Scale: Yes/ No {forced choice}	To show if citizens use the information for empowerment, i.e. be able to engage themselves in policy orientated decision-	Count and Percentage	Relationship with other variables – chi-square	

Definition of terms	Options/ Values	Definition of concepts	Scale	Rationale			Remarks
				Objectives	Methods (descriptive analysis)	Methods (possible statistical tests)	
				making processes			
Question 18: How many times annually do you take part in the following ways of participatory policy orientated decision-making conducted by the government online?							On BOS: Scale/ Rank question
	Polls Survey Petition Referendum Other (please specify)		Ordinal scale: Never Once Twice				

Definition of terms	Options/ Values	Definition of concepts	Scale	Rationale			Remarks
				Objectives	Methods (descriptive analysis)	Methods (possible statistical tests)	
			Three times Four times More than four times				
Witnessing information provision and citizens-government interaction and consultation							
Question 19: Do you access or use government social media pages such as Facebook pages, YouTube channels, and Twitter accounts?							On BOS: multiple choice (single answer) question

Definition of terms	Options/ Values	Definition of concepts	Scale	Rationale			Remarks
				Objectives	Methods (descriptive analysis)	Methods (possible statistical tests)	
			Categorical scale: Yes No	To determine the number of citizens who access government social media	Counts and percentage	Relationship with other variables – chi-square; mean difference/ sub-sample mean difference T-Test/ ANOVA	If No selected, jump to question 24; and skip question 16 under Government ministry social media pages

Definition of terms	Options/ Values	Definition of concepts	Scale	Rationale			Remarks
				Objectives	Methods (descriptive analysis)	Methods (possible statistical tests)	
							(e.g. Facebook, Twitter page)
Question 20: On a weekly basis, how frequently do you perform the following activities on online platforms (for example, Facebook pages, Twitter accounts, YouTube channels) of the government (that is, Ministry, Department, and Agency)?							On BOS: Scale/ Rank question
	Comment on government posts,		Ordinal scale: None Once	To demonstrate a level of citizens	Counts and percentages	Relationship and its significance with other	

Definition of terms	Options/ Values	Definition of concepts	Scale	Rationale			Remarks
				Objectives	Methods (descriptive analysis)	Methods (possible statistical tests)	
	Share government posts including re-tweet for Twitter, Reply to a comment of others, Other (please specify)		Twice Three times More than three times	engagement in public decision, and compare this participation with that of the national media institutions		variables – chi-square/ spearman's rho	
Question 21: How frequently does the government perform the following activities on its social media pages (for example, Facebook page, YouTube channel, and Twitter account) in the six months?							On BOS: Scale/

Definition of terms	Options/ Values	Definition of concepts	Scale	Rationale			Remarks
				Objectives	Methods (descriptive analysis)	Methods (possible statistical tests)	
							Rank question
Government means ministries, departments, and agencies	Interacting with citizens, Consulting citizens, Providing feedback on consulted policy issues, Publishing government news, Disseminating government information, e.g.		Ordinal scale: None Once Twice Three times Four times More than four times	To show a perception of citizens of government interaction and consultation; and likely readiness of the government	Frequency and proportion	Relationship with other variables – chi-square	

Definition of terms	Options/ Values	Definition of concepts	Scale	Rationale			Remarks
				Objectives	Methods (descriptive analysis)	Methods (possible statistical tests)	
	policy, budget and finance, legislation, Other (please specify)		Don't know	towards e-participation [proxy to the influence of the Internet on democratisation process]			
Question 22: What is your view or opinion about the activeness of government social media pages such as Facebook page, YouTube channel, and Twitter account? Please select a number that is very close to your opinion on the scale of 0 to 10; 0 being almost no activities per day, and 10 being a lot of a number of activities per day.							On BOS: Scale/ Rank question

Definition of terms	Options/ Values	Definition of concepts	Scale	Rationale			Remarks
				Objectives	Methods (descriptive analysis)	Methods (possible statistical tests)	
Activeness means performing all or some of kinds of activities of a particular social medium such as postings, replies, likes at least in a day.	Activeness		Interval scale: 0 1 2 3 4 5 6 7 8 9 10	To identify the perception of citizens of a degree of use of government social media	Counts and percentages; central tendency and dispersion	Relationship with other variables – chi-square/ spearman's rho/ sub-sample mean	Change it to score – inactive vs active.

Definition of terms	Options/ Values	Definition of concepts	Scale	Rationale			Remarks
				Objectives	Methods (descriptive analysis)	Methods (possible statistical tests)	
Perception of modern ICT media use in public participation							
Question 23: From your experience, how much do you agree or disagree with the following statements about the use of the Internet, for example, website, social media such as Facebook, YouTube, and Twitter in public participation in Tanzania?							On BOS: Scale/ Rank question
	Citizens become more empowered, Less interaction/ consultation between the government and citizens on policy issues,		Ordinal scale: Strongly agree, Agree, Neither/ Nor,	To reveal a perception esp. utopian vs dystopian, and syntopia as well (when a neutral	Count and Percentage	Relationship with other variables – chi-square/spearman's rho	

Definition of terms	Options/ Values	Definition of concepts	Scale	Rationale			Remarks
				Objectives	Methods (descriptive analysis)	Methods (possible statistical tests)	
	More efficient, More access to or use of government information, Less effective, Social media are not appropriate for government-citizen decision-making process		Disagree, Strongly disagree,	position is selected)			
Demographics/ descriptors (including sample characterization)							

Definition of terms	Options/ Values	Definition of concepts	Scale	Rationale			Remarks
				Objectives	Methods (descriptive analysis)	Methods (possible statistical tests)	
Question 24: What is your gender?							On BOS: Multiple choice (single answer) question
	Male, Female		Categorical / dichotomous scale.	To find out any relationship with online public participation	Count and Percentage	Difference/ relationship with other variables – chi-square/ T-Test	

Definition of terms	Options/ Values	Definition of concepts	Scale	Rationale			Remarks
				Objectives	Methods (descriptive analysis)	Methods (possible statistical tests)	
Question 25: How old are you? Please select only one category under which your age falls.							On BOS: multiple choice (single answer) question
	18-22 23-27 28-32 33-37 38-42 43-47 48-52		Ordinal scale: the gap of 3 years, i.e. the range of 4 years (based on	To identify any association between age and public participation	Count and Percentage; recoding – ordinal to score not possible	Relationship with other variables – chi-square/ spearman's rho	

Definition of terms	Options/ Values	Definition of concepts	Scale	Rationale			Remarks
				Objectives	Methods (descriptive analysis)	Methods (possible statistical tests)	
	53-57 58-62 Above 62		and adapted from 2012 census key age groups)	via the Internet			
Question 26: What is the highest level of your formal education?							On BOS: multiple choice (single answer) question

Definition of terms	Options/ Values	Definition of concepts	Scale	Rationale			Remarks
				Objectives	Methods (descriptive analysis)	Methods (possible statistical tests)	
As defined by United Republic of Tanzania (2016a)	Primary, Secondary, Certificate (a year post-primary/ secondary course), Ordinary diploma, Advanced diploma, undergraduate, Postgraduate (certificate/ diploma/ Masters), Doctoral or higher, Other (please specify)		Ordinal scale.	To reveal behaviour and attitudes towards online public participation based on education background; {Many studies also show that the higher the	Frequency and proportion	Relationship and its significance with other variables – chi-square	

Definition of terms	Options/ Values	Definition of concepts	Scale	Rationale			Remarks
				Objectives	Methods (descriptive analysis)	Methods (possible statistical tests)	
				level of education, the more the access and use of the Internet }			
Question 27: What is your occupation?							On BOS: Single-line free text question
	Open-ended			To identify behaviour	Post-coding,	Relationship and its	

Definition of terms	Options/ Values	Definition of concepts	Scale	Rationale			Remarks
				Objectives	Methods (descriptive analysis)	Methods (possible statistical tests)	
				and attitude pattern towards online public participation in relation to occupation;	then count and percentage	significance with other variables – chi-square/ spearman's rho/ Pearson's r/ ANOVA/ T-Test	
Question 28: What is your average monthly gross income in Tanzanian shillings in the past twelve (12) months? Choose one of the categories under which your monthly gross income falls.							On BOS: multiple choice

Definition of terms	Options/ Values	Definition of concepts	Scale	Rationale			Remarks
				Objectives	Methods (descriptive analysis)	Methods (possible statistical tests)	
							(single answer) question
Adopted from Integrated Labour Force Survey 2014, Table 3.5 (National Bureau of Statistics, 2015); Household	Below 65,000 65,000-150,000 150,001-300,000 300,001-500,000 500,001-1,500,000 Above 1,500,000		Ordinal scale.	Proxy indicator for affording internet connectivity constantly	Count and Percentage; Not desirable to categorise values from ordinal to score, i.e.	Relationship and its significance with other variables	

Definition of terms	Options/ Values	Definition of concepts	Scale	Rationale			Remarks
				Objectives	Methods (descriptive analysis)	Methods (possible statistical tests)	
Budget Survey 2011/ 12 (United Republic of Tanzania, 2014b)					recoding; less statistical power		
Question 29: What is your marital status?							On BOS: multiple choice (single answer) question

Definition of terms	Options/ Values	Definition of concepts	Scale	Rationale			Remarks
				Objectives	Methods (descriptive analysis)	Methods (possible statistical tests)	
Categories used in 2012 Census (United Republic of Tanzania, 2014a, p. 25) and Household Budget Survey 2011/12 (United Republic of Tanzania, 2014b, p. 113)	Never married, Married, Living together (without marriage), Separated, Divorced, Widowed,		Categorical scale	To find out whether or not marital status has any impact on online public participation esp. on information seeking and interaction	Frequency and percentage	Relationship and/ difference and its significance with other variables.	

Definition of terms	Options/ Values	Definition of concepts	Scale	Rationale			Remarks
				Objectives	Methods (descriptive analysis)	Methods (possible statistical tests)	
				with the government			
Question 30: What is the size of a household you belong to? Please use numerals only.							On BOS: Single-line free text question
Household means a socio-economic unit involving one or more persons, not	Open-ended		Score/ ratio scale	To find out if the household size influence e-	Central tendency (mode, mean, median) and	Relationship and its significance with other variables – Pearson's r/	

Definition of terms	Options/ Values	Definition of concepts	Scale	Rationale			Remarks
				Objectives	Methods (descriptive analysis)	Methods (possible statistical tests)	
necessary blood/marriage related with shared living and catering arrangements, i.e. shared consumption (National Bureau of Statistics, 2011); size				participation adoption.	dispersion (SD, variance, range)	spearman's rho depending upon returns and sample distribution; mean the difference in relation to other variables –	

Definition of terms	Options/ Values	Definition of concepts	Scale	Rationale			Remarks
				Objectives	Methods (descriptive analysis)	Methods (possible statistical tests)	
means a total number of people in one household						sub-sampling	
Question 31: What is the type of headship of the household you belong to?							On BOS: multiple choice (single answer) question

Definition of terms	Options/ Values	Definition of concepts	Scale	Rationale			Remarks
				Objectives	Methods (descriptive analysis)	Methods (possible statistical tests)	
(National Bureau of Statistics, 2011)	Male-headed Female-headed		Categorical / dichotomous scale	To see if household type influences online public participation.	Counts and percentages	Relationship and its significance level with other variables – chi-square	
Question 32: Email (email address)							On BOS: single-line free text question (always

Definition of terms	Options/ Values	Definition of concepts	Scale	Rationale			Remarks
				Objectives	Methods (descriptive analysis)	Methods (possible statistical tests)	
							hidden question to prevent participants from changing it)
	Open-ended			Pre-population parameter (to use survey invitation email tool,			

Definition of terms	Options/ Values	Definition of concepts	Scale	Rationale			Remarks
				Objectives	Methods (descriptive analysis)	Methods (possible statistical tests)	
				trace returns of each participant/ to identify responses of a participant; and to send individual reminders or to ask for clarifications; to give			

Definition of terms	Options/ Values	Definition of concepts	Scale	Rationale			Remarks
				Objectives	Methods (descriptive analysis)	Methods (possible statistical tests)	
				feedback on findings)			

APPENDIX 2. DATA CAPTURING TOOL FOR AVAILABILITY OF GOVERNMENT INFORMATION

Ministry	Web address	Date	Variable (information)	Score (0/1)	Downloadable/ accessible (absolute number of items & percentages)	Number of publications/ items (accessible & inaccessible)	Dates of publications	Relevancy	Remarks
			Policy						
			The legislation, e.g. Act						
			Plan/ strategy/ programme/ project						
			Budget speech/ book						
			report						
			Statistics						

APPENDIX 3. INTERVIEW GUIDE FOR GOVERNMENT OFFICIALS IN ENGLISH AND KISWAHILI LANGUAGES

<p>Question 1: How do you find internet penetration, access and its use in meaningful everyday life practices in Tanzania? [That is, digital culture/ internet penetration/ technological imperative (i.e. the Internet)]. [Je, unaonaje kuenea kwa mtandao wa intaneti/ matumizi yake/ msukumo wa teknolojia hii katika shughuli za maana za kila siku za watanzania?]</p>				
<p>Question 2: Do you use the Internet? If yes, work/ education// non-work/ not education; Tell me a few examples of activities you have used the Internet. [Je, unatumia mtandao wa intaneti?]? [Kama ndio, unatumia kwa ajili gani – elimu/ kazi// nje ya kazi/ sio kwa ajili ya elimu?] [Niambie mifano michache ya mambo ambayo umefanya kwa kutumia mtandao wa intaneti] [follow up question to question 1 above if not covered there exhaustively]</p>				
<p>Question 3: Do you use social media e.g. Facebook? If yes, education// non-work/ not education? Tell me few examples of activities you have used social media. [Je, unatumia mitandao ya kijamii kwenye intaneti, mfano Facebook?] [Kama ndio, unatumia kwa ajili gani – elimu/ kazi// nje ya kazi/ sio kwa ajili ya elimu?] [Niambie mifano michache ya mambo ambayo umefanya kwa kutumia mtandao wa Intaneti]</p>				
<p>Question 4: Does this ministry have a website? [Je, wizara hii ina tovuti?] [immediately followed by question 6 to avoid assuming that the particular ministry has those media]</p>				
<p>Question 5: Does this ministry have social media pages, e.g. Facebook page, Twitter account, and YouTube channel? [Je, wizara hii ina kurasa za mitandao ya kijamii kwenye intaneti, mfano, ukurasa wa Facebook, akaunti ya Twitter, na chaneli ya YouTube]? [immediately followed by question 7 to avoid assuming that the particular ministry has those media]</p>				

Question 6: What are the primary goals of the government of using the website? [Ni malengo/ lengo gani hasa ya/ la serikali ya/ la kutumia tovuti,] [to be skipped if covered in question 3 above as the key informant might say 'Yes' and provide reasons for having them]				
Question 7: What are the primary goals of the government of using social media, e.g. Facebook page, Twitter account? [Ni malengo/ lengo gani hasa ya/ la serikali ya/ la kutumia mitandao ya kijamii kwenye intaneti, mfano, ukurasa wa Facebook, akaunti ya Twitter?] [to be skipped if covered in question 4 above as the key informant might say 'Yes' and provide reasons for having them]				
Question 8: What is your view on the adequacy of information on government, e.g. ministry website (to empower citizens to participate)? [Mtazamo wako ukoje juu ya utoshelezaji wa taarifa/ habari za serikali, mfano, tovuti ya wizara (kuwajengea uwezo wananchi)?				
Question 9: what kind of information is available on government website esp. that of this ministry [Ni aina gani ya taarifa/ habari zilizopo kwenye tovuti ya serikali, hususan, wizara hii?]				
Question 10: In your view, what is the preference of most citizens (who are internet literate) of online access to government information to the physical one? [Kwa maoni yako kwa wananchi walio wengi wenye uwezo wa kutumia Intaneti, wanapendelea/ wanachagua zaidi kipi katika kupata taarifa/ habari za serikali kati ya njia ya mtandao wa intaneti na kwenda/ kufika wenyewe katika ofisi husika?]				
Question 11: Do you use social media, e.g. Facebook page, to consult and/ or interact with citizens regularly about policy orientated decision making? Are				

they useful/ right tools for government-citizen interaction? [If not covered in detail in question 5/7 or used a follow-up question] [Je, mnamia mitandao ya kijamii ya Intaneti, mfano, ukurasa wa Facebook kuwashirikisha au kuwasiliana wananchi kuhusu kufanya maamuzi ya serikali ya kisera mara kwa mara?]; Je inafaa kwa/ katika kushirikisha wananchi?

Question 12: Do you use online decision-making tools e.g. polls, petitions to consult citizens on policy orientated decision making? Are they useful/ right tools for government-citizen interaction? [Je, mnamia njia za kwenye mtandao wa intaneti za kufanya maamuzi, mfano, wananchi kutoa maoni juu ya jambo fulani, wananchi kusaini matakwa/ ombi kwa serikali ili ichukue hatua juu ya jambo fulani, katika kuwashirikisha wananchi kwenye maamuzi ya serikali ya kisera?]; Je inafaa kwa/ katika kushirikisha wananchi?

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Question 13: What is your opinion about citizens' awareness of online public participation? [Una maoni gani juu ya wananchi kuwa na taarifa kuhusu ushiriki wao kwa njia ya mtandao wa intaneti kupata habari na/ au taarifa za serikali, kufanya maamuzi ya kisera?]

APPENDIX 4. EXCERPT OF POST-CODES, DESCRIPTION, SOURCES AND REFERENCES OF INTERVIEWS

Name	Description/ Memo	Source	Reference/ instance
Awareness-knowledge		7	27
citizens		6	16
Digital Gap=innovation cluster		3	3
government officials		1	2
Promotion	Strategies used to create awareness of e- participation.	5	9
Compatibility=perceptions=values- attitudes		6	10
people		1	1
public officials		6	9
Relative Advantage- efficiency-cost-effective		1	1
e-consultation=adopted-rejected		8	60
consultation opportunities		8	41
Adoption		2	5
Rejection		8	35
Complexity-affordability	not clear about the kind of assistance - technical or financial	2	2
Complexity-technology		1	1

Name	Description/ Memo	Source	Reference/ instance
digital rift=innovation cluster		5	9
methods= means		4	19
Decision-making tools		3	4
Compatibility=attitude1		1	1
Modification	innovation, which can be customised and different settings.	1	1
Trialability		1	1
social media pages		3	9

Source: Fieldwork data, 2016

APPENDIX 5. THE INTERVIEW INFORMED CONSENT FORM

Project Title: Examining public participation in Tanzania: provision and access to government information, interaction and consultation, and decision making via the public Internet

Name & details of the researcher: Hubert Shija Massanja, PhD Student, Information Studies department; Institute of Management, Law and Information Science; email: hsm6@aber.ac.uk

Consent form

This form asks you to give informed consent to take part in the above study.

Please place your initials in the box to the right of each statement given below to confirm your acceptance:

1.	I have read and understood the Information sheet given to me.	
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2.	I understand that my participation is voluntary and that I can withdraw from the study at any time, until the point of publication, without having to give a reason and being punished in any way.	
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3.	I consent to the interview being audio recorded.	
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4.	I consent to my anonymised data being used in the final written research outputs, that is, the doctoral thesis, scholarly journal articles, and presentations.	
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5.	I consent to the disclosure of my data being used in the final written research outputs, that is, the doctoral thesis, scholarly journal articles, and presentations where necessary but 'on the record' basis.	
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6.	I consent to my participation in the above-named study.	
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Name:

Signed:

Date:

Participant

Signed:

Date:

Researcher

For more details, please communicate with student's supervisors, Dr Allen Edward Foster, at aef@aber.ac.uk, and Dr Pauline Margareth Rafferty at pmr@aber.ac.uk; and/ or departmental director of postgraduate studies, Prof. David Ellis, at dpe@aber.ac.uk; or visit Research, Business and Innovation department website <http://www.aber.ac.uk/en/rbi>